Draft Environmental Impact Report

Appendix

Public and Agency Scoping Process Summary

Pacheco Reservoir Expansion Project

November 2021

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Attachments

Abbreviations and Acronyms

CEQA	California Environmental Quality Act
EIR	Environmental Impact Report
NOP	Notice of Preparation
Project	Pacheco Reservoir Expansion Project
Valley Water	Santa Clara Valley Water District

Section 1. Notice of Preparation and Scoping Period Public Comments

This appendix contains comments received during the two public scoping periods for Santa Clara Valley Water District's (Valley Water) Pacheco Reservoir Expansion Project (Project). In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15082, Valley Water, as the CEQA lead agency, prepared a Notice of Preparation (NOP) for this Environmental Impact Report (EIR). The NOP contained a description of the Project, a summary of the environmental effects of the Project to be addressed in the EIR, and served as the official opening of the required scoping period. On August 7, 2017, the Initial Study and NOP were submitted to the State Clearinghouse and subsequently posted to CEQAnet, an online searchable environmental database for documents submitted to the State Clearinghouse. The Initial Study and NOP were distributed through the State Clearinghouse to all applicable state responsible and trustee agencies as required under CEQA. The initial scoping period for the Project remained open through September 6, 2017, a period of 30 days. The scoping period was extended an additional 30 days through October 5, 2017, for a total period of 60 days.

On February 8, 2021, Valley Water reopened the scoping period and held two virtual Project public scoping and update meetings via Zoom and Facebook Live on February 24 and 25, 2021. Virtual public scoping meetings were held due to the on-going Covid-19 pandemic. An invitation to the Zoom meetings was mailed and emailed to approximately 470 elected officials, tribes, agencies, organizations, landowners, other stakeholders and interested parties, posted on the Valley Water website, published in local newspapers, and posted on social media (i.e., Facebook). The purpose of these meetings was to update the public and agencies on progress made on the project planning and environmental review. In addition, these virtual events allowed for solicitation of additional questions and written comments from the public and agencies on the scope and content of the EIR, consistent with Public Resources Code Section 21083.9(a)(2). This subsequent 32-day public scoping period closed on March 12, 2021.

This *Public and Agency Scoping Process Summary Appendix* includes two attachments: *Attachment A – The Pacheco Reservoir Expansion Project Initial Study and NOP* (August 2017) and *Attachment B – Public Scoping Comments*. Tables 1-1 through 1-3 provide the commenter name, the date the comment(s) was received, and if it was submitted via hard copy, electronically, or both. The details of each comment letter are available in Attachment B. Scoping letters or e-mails were submitted by state agencies, a Native American Tribe, organizations, and community members during the comment period.

Table 1-1. State Agency Comments Received During Scoping Periods

Commenter	Date Received
California Department of Fish and Wildlife	08/29/2017[2] & 9/7/2017[3]
California Department of Transportation	10/05/2017[3]
California Department of Water Resources, Division of Safety of Dams	10/06/2017[1]
Native American Heritage Commission	08/24/2017[1]
State Water Resources Control Board	09/20/2017[1]

Notes:
[1] Comment received via hard copy.
[2] Comment received electronically.
[3] Comment received both electronically and via hard copy. The comment letter attached to the electronic submission is the same as the submitted hard copy version. Attachment B contains a singular copy of the comment letter.

Table 1-2. Native American Tribal Comments Received during Scoping Periods

Commenter	Date Received
Costanoan Rumsen Carmel Tribe: Tony Cerda	11/11/2020[1]

Notes:
[1] Comment received electronically.

Table 1-3. Local Organizations and Individual Comments Received during Scoping Periods

Commenter	Date Received
California Native Plant Society Santa Clara Valley Chapter	03/12/2021[1]
Center for Biological Diversity	10/11/2017[3]
Santa Clara Valley Audubon Society	09/03/2017[2] & 10/10/2017[2]
Sierra Club Loma Prieta	09/03/2017[2], 09/07/2017[2], 10/11/2017[2] & 3/15/2021[2]
Transoceanic Systems	03/27/2021[2]
Individual: Bill Florek	11/10/2020[2]
Individual: Alan and Meg Giberson	03/12/2021[2]
Individual: Katja Irvin	02/24/2021[2]
Individual: Bob Patrie	03/04/2021[2]
Individual: William Sherman	03/10/2021[2]

Notes:
[1] Comment received via hard copy.
[2] Comment received electronically.
[3] Comment received both electronically and via hard copy. The comment letter attached to the electronic submission is the same as the submitted hard copy version. Attachment B contains a singular copy of the comment letter.

Draft Environmental Impact Report

Appendix

Public and Agency Scoping Process Summary

Attachment A

Pacheco Reservoir Expansion Project Initial Study and Notice of Preparation

Pacheco Reservoir Expansion Project

November 2021

Santa Clara Valley Water District

Pacheco Reservoir Expansion Project Initial Study and Notice of Preparation

August 2017

NOTICE OF PREPARATION

From: Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Subject: **Notice of Preparation of a Draft Environmental Impact Report**

Project Title: Pacheco Reservoir Expansion Project

Project Location: Pacheco Reservoir and Creek

The Santa Clara Valley Water District will be the Lead Agency and will prepare an environmental impact report for the above project. The District needs to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but **not later than 30 days after receipt of this notice**.

Please send your response to:

Melih Ozbilgin
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118
(408) 630-2725
mozbilgin@valleywater.org

We will need the name for a contact person in your agency.

Norma Camacho
Interim Chief Executive Officer

8/4/17
Date

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Abbreviations and Acronyms

AB 32	California Global Warming Solutions Act
ARB	California Air Resources Board
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practices
CalFire	California Department of Forestry and Fire Protection
CalTrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CO	carbon monoxide
CVP	Central Valley Project
CWA	Clean Water Act
Delta	Sacramento-San Joaquin River Delta
CalTrans	California Department of Transportation
DPS	Distinct Population Segment
DSOD	Division of Safety of Dams
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
GHG	Greenhouse gas emissions
GRCD	Grassland Resource Conservation District
GSA	Groundwater Sustainability Agency
HCP	Habitat Conservation Plan
hp	horsepower
kV	kilovolt
LOS	level of service
M&I	municipal & industrial
MVA	Mega Volt Amp
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Plans
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOP	Notice of Preparation
NO_x	nitrogen oxide
PG&E	Pacific Gas and Electric Company
PM	particulate matter
$PM_{2.5}$	particulate matter with a diameter of 2.5 microns or less
PM_{10}	particulate matter with a diameter of 10 microns or less
Project	Pacheco Reservoir Expansion Project

Reclamation	U.S. Department of Interior, Bureau of Reclamation
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SAAQS	State Ambient Air Quality Standards
SBCWD	San Benito County Water District
SCCC	South-Central California Coast
SCVWD	Santa Clara Valley Water District
SGMA	Sustainable Groundwater Management Act
SLLPIP	San Luis Low Point Improvement Project
SR 152	State Route 152/Pacheco Pass Highway
State Board	State Water Resources Control Board
SWPPP	stormwater pollution prevention plan
TAF	thousand acre feet
TDH	Total Dynamic Head
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
VHP	Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan

CHAPTER 1 PROJECT DESCRIPTION

1.1 Introduction

This Initial Study and Notice of Preparation (NOP) has been prepared by the Santa Clara Valley Water District (SCVWD) as part of the Pacheco Reservoir Expansion Project (Project) to evaluate the potential physical, biological and cultural impacts of expanding the existing Pacheco Reservoir. The Project is being conducted consistent with the California Environmental Quality Act (CEQA), and other pertinent federal, state, and local laws and policies. SCVWD is serving as the lead agency for compliance with CEQA.

The primary partners in the Project include two local water agencies, Pacheco Pass Water District (PPWD) and San Benito County Water District (SBCWD), and eight south-of-Delta wildlife refuges in the San Joaquin River watershed named in the Central Valley Project Improvement Act that are managed by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and the landowners of privately owned and managed wetlands in the Grassland Resources Conservation District (GRCD). SCVWD, PPWD and SBCWD have executed a Principles of Agreement to (1) evaluate the potential benefits of expanding Pacheco Reservoir, and (2) develop a Water Storage Investment Program application for the Project.

The Project is a multi-agency effort that is expected to provide local, regional and statewide environmental, water supply reliability, and water quality benefits. These benefits include ecosystem improvements in Pacheco Creek for the federally threatened South-Central California Coast (SCCC) steelhead; increased water supplies for the Refuge Water Supply Program to support wetland-dependent wildlife populations; improved municipal and industrial (M&I) water supply reliability, including during drought periods and emergencies (e.g., Sacramento-San Joaquin Delta [Delta] outages); reduced San Luis Reservoir low point issues and improved water quality for Central Valley Project (CVP) San Felipe Division; and reduced flood risk along Pacheco Creek.

1.1.1 Background and Previous Studies

The existing Pacheco Reservoir and North Fork Dam were constructed in 1939 by PPWD to provide irrigation and domestic water supply. The existing Reservoir has an operational capacity of 5,500 acre-feet (AF). Water released from the Reservoir flows down Pacheco Creek and seeps through the creek bed and into the underlying groundwater aquifer as it winds towards its confluence with the Pajaro River. The released flow is controlled to fully infiltrate into a groundwater aquifer that begins at the northern tip in Santa Clara County and extends southwards into San Benito County. Agricultural users in PPWD and SBCWD's service areas pump water from the aquifer. Historic operation strategies for Pacheco Reservoir were informal, but generally effective for recharging the groundwater basins; however, water supply needs in the areas served by Pacheco Reservoir have changed since it was first constructed.

The feasibility of expanding Pacheco Reservoir has been studied by SCVWD and U.S. Department of the Interior, Bureau of Reclamation (Reclamation) for over 25 years. SCVWD began studying the expansion of Pacheco Reservoir in 1991 in order to efficiently use both contracted and supplemental imported water supplies and to provide increased reliability during dry water years. The *Reconnaissance Level Evaluation of Alternative Dam and Reservoir Site* (Wahler Associates 1993) evaluated 13 potential reservoir sites in Santa Clara County and developed four potential alternatives for an expanded reservoir on North Fork Pacheco Creek, near the existing North Fork Dam. Other potential reservoir sites included San Felipe, Packwood and Clarks Canyon in the Anderson Reservoir watershed; Blue Ride, Coe and Los Osos, in the Coyote Reservoir watershed; Smith Creek, high in a watershed that is tributary to Coyote Creek below Anderson Reservoir; and South Fork Pacheco, Ausaymas, Harper and Cedar Creek, in a small watershed tributary to Pacheco Creek (Wahler and Associates 1993).

San Luis Low Point Improvement Project (SLLPIP) studies further evaluated the feasibility of expanding Pacheco Reservoir in order to provide water supply reliability to SCVWD related to the frequency and duration of the low point issue in San Luis Reservoir. Previous SCVWD and Reclamation studies and reports that investigate the expansion of Pacheco Reservoir include the *San Luis Low Point Improvement Project Initial Alternatives Information Report* (Bureau of Reclamation 2008)*, San Luis Low Point Improvement Project Plan Formulation Report* (Bureau of Reclamation 2011) and *San Luis Low Point Improvement Project Draft Feasibility Report* (Bureau of Reclamation 2013). The expansion of Pacheco Reservoir was evaluated as an alternative in the SLLPIP studies specifically to address water supply impacts related to San Luis Reservoir low point conditions. However, this alternative was screened out during the planning process because, at the time, only the SLLPIP benefits related to CVP water delivery interruptions were quantified for water supply reliability and these benefits were determined to be insufficient to justify projected costs. However, more recent technical investigations conducted by SCVWD have identified that a cost-effective, multi-objective project that, if constructed, could provide both public and non-public benefits: expanding the active storage capacity of the existing Pacheco Reservoir to 140.8 thousand acre-feet (TAF) through construction and operation of a new dam, conveyance facilities, and related appurtenant structures.

1.1.2 Santa Clara Valley Water District

SCVWD is a public agency that provides water supply, flood protection, and stream stewardship for Santa Clara County, and serves approximately 1.8 million people in 15 cities and unincorporated areas of Santa Clara County. SCVWD sells treated water to seven local water retailers, who in turn provide it to their customers. These retailers include: San Jose Water Company, California Water Service Company, City of Milpitas, City of Mountain View, City of San Jose, City of Santa Clara, and City of Sunnyvale.

As a Groundwater Sustainability Agency, SCVWD also manages the groundwater basins, which are the source of nearly half of Santa Clara County's water supply. Groundwater basins are replenished with local surface water and with imported water conveyed through the Delta. Imported water and local surface water also supply three drinking water treatment plants. SCVWD also collaborates and coordinates with local agencies and recycled water producers on recycled water development and use.

For flood protection, SCVWD carries out capital and maintenance projects throughout the year in neighborhoods across the County. In addition, SCVWD partners with cities and the County to provide open space and recreational opportunities at many of its 10 reservoirs and along creeks throughout the County.

1.1.3 CEQA Review

As the lead agency responsible for compliance with the CEQA, SCVWD has determined that the Pacheco Reservoir Expansion Project is a "project" for the purposes of CEQA (pursuant to CEQA Guidelines §15378), and would have the potential to result in significant environmental effects. Accordingly, SCVWD will be preparing an Environmental Impact Report (EIR) for the Project (CEQA Guidelines §15064).

This Initial Study, which is presented together with the NOP required by CEQA and the state's CEQA Guidelines (California Code of Regulations (CCR) §15082), contains a brief description of the Project, including its goals and objectives and potential environmental impacts. It also outlines the process that will be used to determine the scope of analysis in the EIR, and provides an overview of the opportunities for participation in review of the EIR, along with contact information.

1.2 Project Setting

The Project includes both a primary and extended study area because of the potential influence of the proposed expansion of Pacheco Reservoir and subsequent system operations on resources over a broad geographic area. The primary study area includes the following:

- Pacheco Reservoir and the surrounding vicinity
- Pacheco Pumping Plant, near San Luis Reservoir, and surrounding vicinity
- Pacheco Creek
- Wildlife refuges within the San Joaquin River watershed that receive Incremental Level 4 water supplies

The extended study area includes the following:

- Pajaro River
- San Luis Reservoir and San Joaquin Valley water conveyance facilities
- SCVWD and Project partner service areas

Pacheco Reservoir is located in unincorporated Santa Clara County, approximately 17 miles northeast of the City of Gilroy and one mile north of State Route 152 (SR 152), as shown in Figure 1-1 and in detail in Exhibit 1. Pacheco Reservoir is situated on the North Fork of Pacheco Creek. Pacheco Creek has its headwaters in the Diablo Range, northeast of the City Hollister. Downstream of Pacheco Reservoir, North Fork Pacheco Creek is joined by South Fork Pacheco

Creek, forming Pacheco Creek. Pacheco Creek continues to flow west until it reaches San Felipe Lake, draining approximately 168 square miles in Santa Clara and San Benito Counties. San Felipe Lake is formed by the confluence of Pacheco Creek, Tesquisquita Slough and Ortega Creek; and is drained by Miller Canal. Miller Canal joins the Pajaro River southwest of San Felipe Lake. The Pajaro River then flows southwest until it drains into Monterey Bay.

The existing Pacheco Reservoir, North Fork Dam, and related storage and conveyance infrastructure are currently owned and operated by PPWD. The existing Pacheco Reservoir inundates an area about 192 acres. The land surrounding Pacheco Reservoir is privately owned and is rural, primarily used for livestock grazing.

San Luis Reservoir is located eight miles east of Pacheco Reservoir in unincorporated Merced County. Reclamation owns and jointly operates San Luis Reservoir with the California Department of Water Resources (DWR) to provide seasonal storage for the CVP and State Water Project. San Luis Reservoir is capable of receiving water from both the Delta-Mendota Canal and the California Aqueduct. Deliveries from San Luis Reservoir also flow west through Pacheco Pumping Plant and Conduit to the San Felipe Division of the CVP, which includes SCVWD and SBCWD.

Project construction activities will primarily be conducted in and around Pacheco Reservoir, with some construction occurring under and over SR 152. In addition, construction activities will also occur at Pacheco Pumping Plant near San Luis Reservoir.

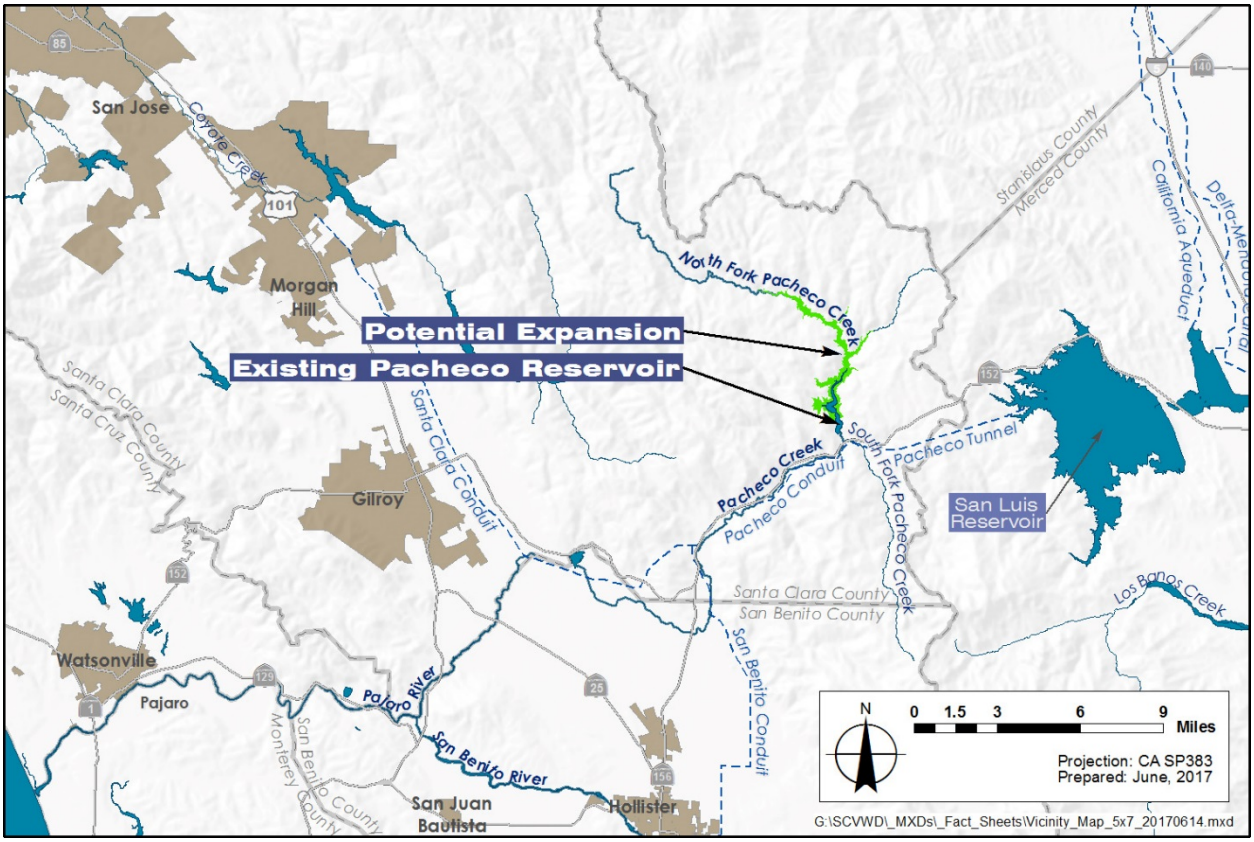


Figure 1-1. Project Location

If implemented, Project operations have the potential to affect eight wildlife refuges in the San Joaquin River Basin of the Sacramento-San Joaquin River Delta (Delta) that receive Incremental Level 4 water supplies.

Project operations also have the potential to affect four California groundwater basins, including seven groundwater subbasins. These subbasins, as defined by DWR Bulletin 118, include:

- Santa Clara Subbasin of the Santa Clara Valley Basin
- Llagas Area, Bolsa Area, Hollister Area, and the San Juan Bautista Area subbasins of the Gilroy-Hollister Valley Basin
- Pajaro Valley Subbasin of the Corralitos Basin
- Delta-Mendota Subbasin of the San Joaquin Valley Basin

1.3 Project Description

The Project includes construction and operation of a new dam and reservoir, pump station, conveyance facilities, and related miscellaneous infrastructure (e.g., access roads). The new dam and reservoir would be constructed on Pacheco Creek 0.5 mile upstream from the existing North Fork Dam, and would inundate most of the existing Pacheco Reservoir. The proposed total storage for the new reservoir is 141.6 TAF, with an active storage of 140.8 TAF. Water will be collected in the new reservoir during the winter months from runoff from the local watershed area, and diversion of CVP supplies from Pacheco Pipeline, when needed.

1.3.1 Project Facilities

The Project would include: a new reservoir with a total active storage capacity of 140.8 TAF; a new earthen dam and spillway; new pipelines and tunnels connecting the new reservoir to the Pacheco Conduit; a new pump station; removal of the existing dam and associated channel modifications; a new regulating tank at Pacheco Pumping Plant; and access improvements. These facilities are shown in Figure 1-2 and detailed in Exhibit 2. Table 1-1 provides the physical features of the major Project components.

Table 1-1. Physical Features of Major Project Components for the Pacheco Reservoir Expansion Project

Project Component	Physical Features
New Dam and Reservoir	
Total Storage Volume	141.6 TAF
Active Storage Volume	140.8 TAF
Surface Area at Full Pool	1,385 acres
Dam Crest Elevation	719 feet msl
Full Pool Elevation	694 feet msl
Dead Pool Elevation	450 feet msl
Embankment Height	319 feet
Dam Crest Length	2,212 feet
Dam Embankment Volume	12,475,688 cy
New Pump Station	
Pump Station Capacity	490 cfs
Pump Station Lift	170 feet
Pump Station Total Horsepower	13,750 hp
Number of Pumps	11
Pipeline/Tunnels	
Diameter	108 inches
Length	4,700 feet
Pacheco Pumping Plant New Regulating Tank	
Capacity	3 million gallons
Diameter	150 feet
Hydraulic Head at Conduit Connection	610 feet
Access Improvements	
40-feet wide permanent roads	2.7 miles
25-feet wide temporary access road to spillway	1.2 miles
25-feet wide temporary haul road to borrow sites	5.7 miles
Electrical transmission line	16 miles

Key:
cfs = cubic feet per second
cy = cubic yard
hp = horsepower
TAF = thousand acre feet

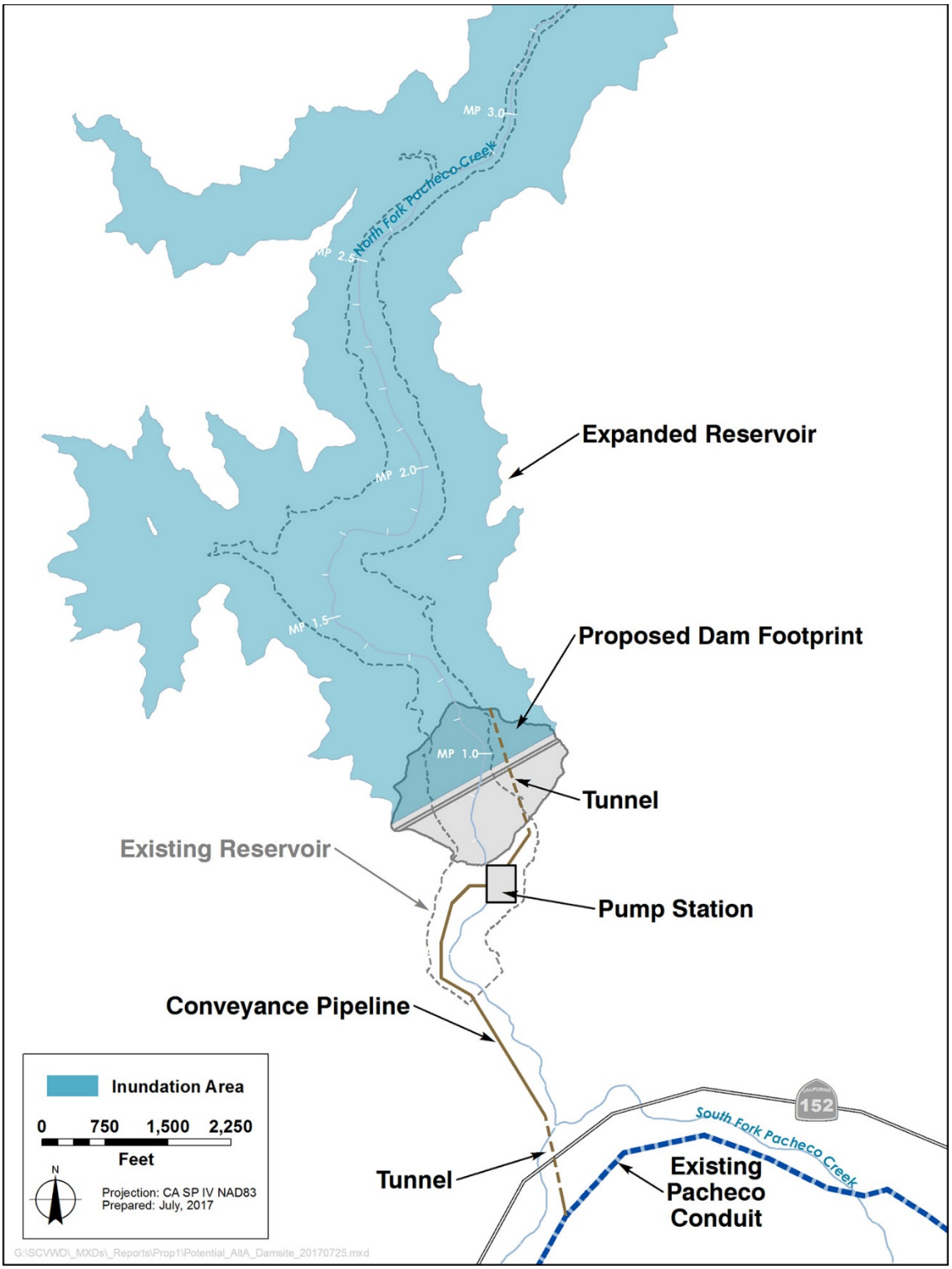
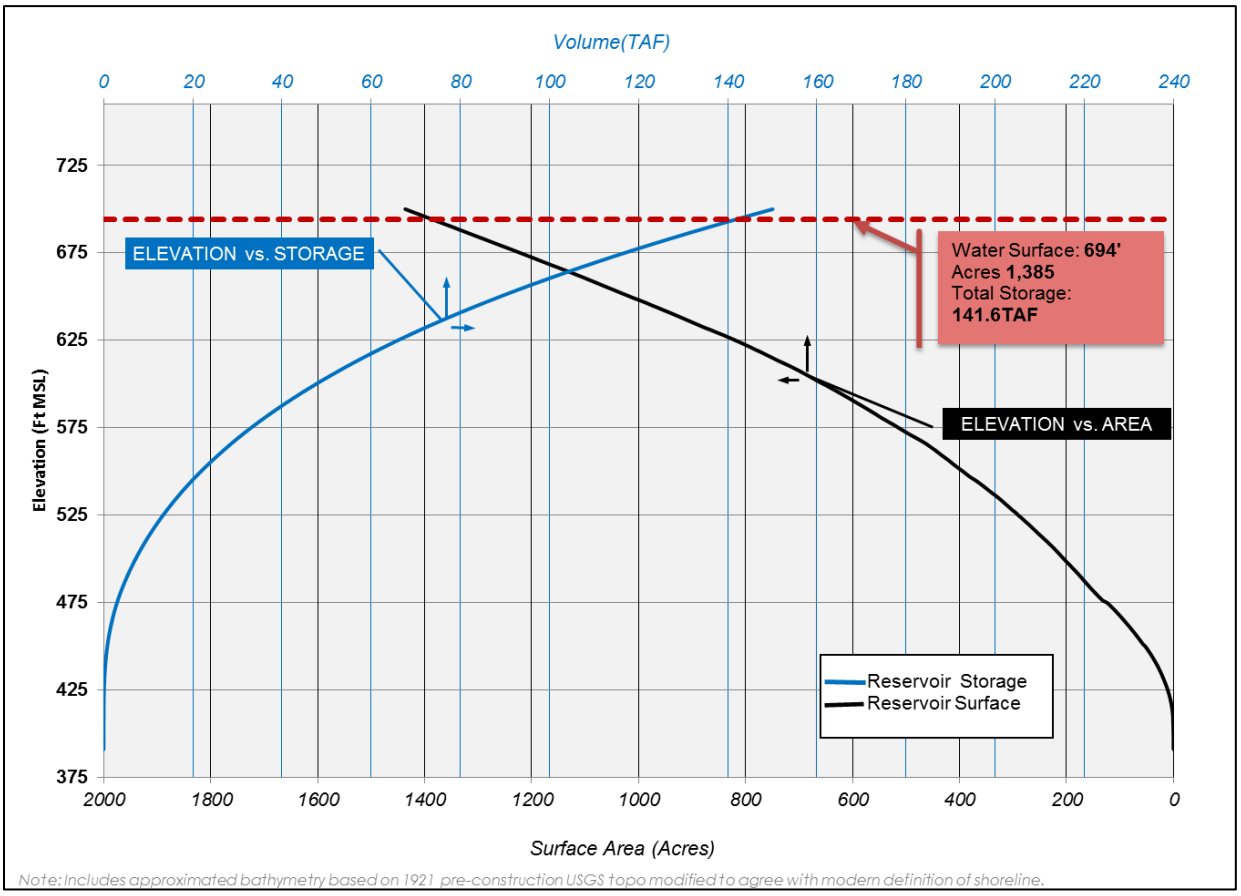


Figure 1-2. Major Project Facilities and New Dam Footprint

Reservoir

The new dam and reservoir will be constructed approximately 0.5 mile upstream from the existing North Fork Dam as shown in Exhibit 3. The reservoir would have a total capacity of 141.6 TAF and an active capacity of 140.8 TAF. The full pool elevation would be 694 feet and would inundate an additional 1,245 acres, for a total of 1,385 total acres inundated. The dead storage volume would be 0.8 TAF with a corresponding water elevation of 450 feet. Figure 1-3 shows the area-capacity curve of the Project.



Key:
MSL = mean sea level
TAF = thousand acre-feet

Figure 1-3. Area/Capacity Curve of Proposed Project

The proposed location of the new dam was selected to maximize capacity and to avoid impacts to Henry W. Coe State Park. The low ground elevation at Henry W. Coe State Park elevation of 710 feet, would be 16 feet above the reservoir full pool elevation. The boundary of Henry W. Coe State Park would be approximately 1,700 feet upstream from the expanded reservoir.

Dam and Spillway

The new embankment dam would be a zoned earthfill structure consisting of an impervious core, flanked by an outer shell of random fill as shown in Exhibit 4. A zoned earthfill dam has been selected for this site because: 1) it would allow for advantageous use of local borrow

materials; (2) it could be designed to be seismically safe in a location with high seismic potential; and 3) it can accommodate a wide range of reservoir drawdown conditions. A system of filters and drains would be provided to control seepage through the dam and foundation. A downstream sand chimney filter would protect the impervious core. A gravel chimney drain located downstream of the chimney filter would convey drainage to a gravel blanket beneath the downstream random fill zone. The gravel blanket drain would convey seepage from the impervious core and overlie form the foundation beneath the downstream random fill zone to the downstream toe of the dam. Sand filter zones would be placed above and beneath the gravel blanket drain to protect the gravel drain from contamination of the overlying random fill and underlying foundation materials. The upstream slope of dam would be protected from reservoir wave action by a 3-foot thick riprap layer.

Ample spillway capacity must be provided for earth fill dams to prevent overtopping. The designed spillway capacity is dependent upon the hazard classification of the dam. The hazard classification depends upon the reservoir storage and dam height, and the potential for downstream damage resulting from dam failure. When there is a risk for loss of life due to dam failure, the California Department of Water Resources Division of Safety of Dams (DSOD) requires that the highest hazard classification be assigned. While there is little development in Pacheco Canyon downstream of the proposed dam, SR 152 is about one mile downstream of the dam, and dam failure might result in the loss of life on SR 152. Consequently, the spillway for the proposed dam will likely need to accommodate the probable maximum flood.

An uncontrolled side channel spillway with a trapezoidal cross section would be located adjacent to the right (west) abutment of the proposed dam. Due to the relatively steep topography at the dam site, a side channel spillway will reduce the amount of excavation required in order to accommodate the spillway control weir. The spillway features include an approach channel, discharge chute and stilling basin, all of reinforced concrete and founded on bedrock. The side channel spillway entrance would include an ogee weir. A flip bucket located at the end of the stilling basin would dissipate the remaining energy in the basin during high discharge events. After leaving the deflector bucket, spillway discharges would be conveyed through a riprap lined outlet channel into the restored Pacheco Creek channel (see below description). Exhibit 5 shows the profile view of the spillway.

Inlet/Outlet Facilities

The inlet/outlet facilities will consist of a sloping intake/outlet structure and a low-level inlet/outlet designed to provide deliveries to the reservoir from Pacheco Conduit and withdrawals from the reservoir to the conduit and Pacheco Creek. However, these facilities would not be operated to facilitate these flows at the same time. For withdrawals from the reservoir, under normal operating conditions, this inlet/outlet facility will need to simultaneously convey up 490 cub feet per second (cfs) to Pacheco Conduit and release up to 35 cfs to Pacheco Creek.

In addition, the DSOD requires that dams provide outlet facilities with sufficient capacity to evacuate the reservoir quickly, in the unlikely event that emergency conditions occur at the dam site. The DSOD guidelines indicate that large reservoirs should have the capability to lower the pool elevation by an amount equal to 10 percent of the hydraulic head behind the dam in 10 days. The inlet/outlet conveyance facilities have been sized to accommodate up to 1,350 cfs under emergency drawdown conditions. During emergency conditions, the outlet works would serve as an evacuation outlet for reservoir draw down.

As shown in Exhibit 2, the inlet/outlet facilities would consist of the following structures from upstream to downstream:

- Sloping inlet/outlet structure and low level inlet/outlet,
- Gate valve to switch between delivery/withdrawal operations,
- Conveyance tunnel beneath the dam,
- Valve chamber vault and walk-in tunnel,
- Control gatehouse, and
- Discharge pipe and outlet return channel to Pacheco Creek.

A sloping intake structure would be located north of the left (east) abutment and would consist of a single 132-inch diameter reinforced-concrete structure, with approximately 10 ports located at various elevations for drawing from the reservoir. The sloping inlet/outlet structure for the dam would allow for withdrawals from the reservoir at selected intervals to take advantage of the best water quality (i.e., temperature) in the reservoir. A low-level reservoir inlet would also be constructed, with an inlet elevation of 450 feet, for reservoir drainage. A hydraulically operated gate valve structure would be located upstream of the reinforced-concrete sloping intake to allow for switching between reservoir delivery (through the tunnel) and withdrawal operations (through the outlet structure).

A 2,300-foot long conveyance tunnel would be constructed under the dam abutment to connect the intake structures and the pump station. The conveyance tunnel would be excavated through the bedrock on the left abutment of the dam as shown on Exhibit 2. A profile of the tunnel is shown on Exhibit 6. A 132-inch (inside diameter), concrete-lined tunnel would be located beneath the upstream portion of the dam and would connect the valve chamber vault to the sloping intake structure. The segment beneath the downstream portion of the dam would be a concrete-lined, 192-inch (inside diameter) walk-in tunnel with a 132-inch diameter steel carrier pipe. The walk-in tunnel would allow for access to the steel carrier pipe and valves, located in the valve chamber vault beneath the crest of the dam. The valve chamber vault between the upstream and downstream potion of the tunnel would allow for maintenance and inspection of the downstream tunnel, carrier pipe, and gate valve. The valve chamber vault would consist of a gate valve and upstream guard valve.

The control gatehouse structure would be used to regulate outlet flows from the reservoir to the pump station, for normal releases, and the discharge channel for stream augmentation and emergency releases. Mechanical and physical energy dissipaters would be located at the gatehouse to help control releases.

To connect the new outlet works to Pacheco Creek, the historical Pacheco Creek channel would be restored between the new dam and the existing dam through the existing Pacheco Reservoir. The existing dam would be removed only as part of the Project. If the Project is not implemented, SCVWD has no responsibility related to the existing dam. Restoration of the channel would include excavating a new 1,500-feet long, 1.7-feet deep, one-foot wide, low-flow

channel, and a 6-feet deep, 20-feet wide overbank channel to facilitate riparian restoration. The channel will be designed to reduce streambank erosion (e.g., using bank stabilizing materials), and riparian vegetation will be planted to initiate growth of a new riparian forest along the restored channel.

Pacheco Reservoir Pump Station

The Pacheco Reservoir Pump Station would serve as a two-way pump station that both delivers water to, and withdraws water from the Pacheco Reservoir. The water surface elevation of the new reservoir would have an operating range of 450 feet to 694 feet; however, at the connection point to the Pacheco Conduit the total hydraulic head would be 610 feet. This requires a "two-way" system operating both by gravity and through a booster pump station under the following scenarios:

Conveyance from Pacheco Conduit to New Reservoir:

- Gravity conveyance when the new reservoir water surface is between 450 feet to 600 feet; and

- Pumped conveyance when the new reservoir water surface is between 600 feet to 694 feet.

Conveyance from New Reservoir to Pacheco Conduit:

- Gravity conveyance when the new reservoir water surface is between 694 feet to 620 feet; and

- Pumped conveyance when the new reservoir water surface is between 620 feet to 450 feet.

The conveyance system would contain 10 feet of dynamic head loss that is included in the scenarios above. Isolation valves would enable the pump station to deliver water to, or pump water from, the reservoir. Pressure-reducing sleeve valves were identified as necessary to reduce excess pressure head under certain gravity-flow conditions. These valves would be used only when needed and bypassed at all other times. Additionally, pressure relief valves and discharge structures would be required to prevent over-pressurization of the existing Pacheco Conduit. Flow diagrams of the above scenarios are presented in Exhibit 7 and hydraulic profiles are presented in Exhibit 8.

The pump station would be below the new dam (see Exhibit 2). To provide security and minimize noise levels in the surrounding area, the pumps would be housed in a building. Space has been identified for other facilities on site, including intake, access, parking, surge tanks, power substation, yard piping, and construction staging. The site footprint and conceptual layout for the pump station is shown in Exhibit 9.

The new pump station would need to meet a wide range of lift (0 to 160 feet static plus 10 feet dynamic) and high flow (490 cfs). A single pump station with multiple pump ranges has been proposed to meet these requirements—while preventing pump station horsepower (hp) duplication—limiting the amount of head burned by pump control valves, and minimizing cost. The primary range would be 0 to 94 feet of total dynamic head (TDH), or approximate water surface elevations of 526 to 694 feet (13.6 TAF to 141.6 TAF of total storage). The second

range would be 94 to 170 feet of TDH, or water surface elevation of 450 to 526 feet (5 TAF to 25 TAF of storage). The second range would be accomplished by physically adding additional stages to the pumps, and would only be necessary during unusually dry years to convey the remaining 20 TAF out of the new reservoir. A total of 11 pumps (10 duty plus 1 standby) are planned, however the pump configuration may be refined during future design studies. The pump motors would be sized for the first operating range (higher lift) at 1,250 hp each (13,750 total hp).

Electrical Service to Pump Station
The 14 mega volt amp (MVA) substation for the new reservoir pump station is located in the Pacific Gas and Electric Company (PG&E) service area, with no other nearby service sources. PG&E has a 70 kilovolt (kV) transmission line that cannot support the additional 14 MVA connected load, and it will need to be upgraded to support the increased load. The existing 70 kV transmission line would be upgraded to two circuits, for use by the double-ended substation arrangement for this Project.

Conveyance from Pacheco Reservoir Pump Station to Pacheco Conduit
A pipeline would be constructed to connect the new pump station located immediately downstream of the new dam and the existing Pacheco Conduit as shown in Exhibit 2. The proposed pipeline would be 9 feet in diameter and about 4,700-feet long, with a design capacity of 490 cfs. This pipeline would allow for delivery of imported water from the Pacheco Conduit to the proposed reservoir for future release, and would also provide for reservoir releases to the Pacheco Conduit.

Construction would be by conventional excavation, open trench, and backfill—except for the length of pipe located under SR 152. The length of pipe that would be located under SR 152 and Pacheco Creek would be installed using bore and jack techniques (i.e., tunneling techniques), to minimize impacts during construction. Spoils would be hauled off and disposed of at a suitable location. The tunnel, when completed, would be a 132-inch casing containing a 108-inch carrier pipe. There would also be permanent structures for appurtenances, such as air/vacuum valves, vaults, drains and blowoffs for the conveyance line.

The connection of the pipeline to the existing Pacheco Conduit would be southeast of the existing North Fork Dam, at the location shown in Exhibit 2. The connection would be with a tee in the Pacheco Conduit, with an isolation valve for the turnout (inlet and outlet) for the new reservoir.

New Regulating Tank at Existing Pacheco Pumping Plant
Controls to turn pumps on or off remotely would be based on the water level within the new Pacheco Reservoir and regulating tanks at the existing Pacheco Pumping Plant site near San Luis Reservoir. A second regulating tank at the existing Pacheco Pumping Plant site will be added adjacent to the existing regulating tank to provide additional control buffer and surge control for the new Pacheco Reservoir Pump Station. The new regulating tank would match the elevation, diameter, and materials of the existing tank. This would add a 2nd 3 MG (10 AF), 150-feet diameter reservoir, as shown in Exhibit 10. Additional piping, valving, and controls would be required.

1.4 Project Construction

1.4.1 Preliminary Schedule

The environmental compliance, design, permitting, land acquisition, and financial and institutional arrangements are anticipated to be completed in 2023. Construction is anticipated to take approximately five-and-a-half years from 2024 to 2028. The estimated on-line date is 2029.

1.4.2 Site Preparation

Borrow Areas

Preparation of borrow areas would include the reservoir borrow areas, the spillway area, and the existing dam site prior to its removal. Preparation would include logging, stripping and disposal of topsoil, and implementation of any associated work access or material processing areas. It is assumed that the material processing areas could include a crushing and screening plant at the filter and drain borrow area and a concrete batch plant near the spillway excavation.

Exhibit 11 presents potential borrow areas. The area for impervious borrow materials would be located upstream of Turkey Flat, with material in this area classified as low-plasticity silt or clay. The potential random fill borrow area is just above Turkey Flat, and the material consists of a mix of silt, sand, gravel, and boulders. The proposed rock borrow area is along Pacheco Creek, just above Turkey Flat. Through field observation, the material in this area was determined to be primarily cemented greywacke sandstone.

Approximately 5.75 miles of 25-feet-wide haul road would be required to access the reservoir borrow areas upstream of the embankment location. The haul road would follow an existing access road along Pacheco Creek that would need to be improved. Construction access roads totaling 4 miles and 25-feet wide would need to be constructed across the stream, downstream of the embankment, to access the spillway area. One and a half miles of these construction roads will improve existing access roads, providing permanent access to the site post-construction. An existing bridge over the stream would need to be improved.

Inlet/Outlet Construction

Construction of the tunnel and pipe between the inlet/outlet structure and pump station area would be accomplished as a site preparation activity; either by open-cut excavation, tunneling, or a combination of excavation and tunneling. The low-level intake would also be completed to allow diversion of the stream through the outlet structure for the duration of the following embankment construction. Construction of the outlet tunnel could include excavation for, and construction of, the pump station lower level, that will act as the energy dissipation and discharge pipeline and channel to return flow to the stream below the dam.

Construction methods are anticipated to consist of clearing, grubbing, stripping, and disposal of topsoil; and grading consisting of excavation of soil and rock, filling, and compacting. Blasting of hard, fractured rock may be used to expedite excavation, but it is anticipated to be very limited during site preparation. Site preparation activities would include diversion of surface water, implementation of erosion and sediment controls, and establishment of a construction management area, including placement of temporary construction trailers. Site preparation activities may also include stabilization of potential or active landslide areas.

1.4.3 Dam Construction

Construction activities for the new dam and reservoir would include removing the existing North Fork Dam, and constructing a temporary cofferdam, new embankment dam, and spillway.

Dam Removal

Demolition of the North Fork Dam of the existing Pacheco Reservoir would begin as the water level is drawn down through the outlet and would be completed once the reservoir is fully drained. Removal of the existing dam would proceed from the top down to prevent steep slopes and to minimize the potential for slope failure. Material excavated from the dam, deemed suitable for earth fill, will need to be directly hauled to the temporary cofferdam site for placement and compaction. Unsuitable material will be stockpiled for disposal off-site. Sand, gravel, cobbles, and rock may be segregated from the excavated material and used for site restoration. Bank stabilization and channel reconfiguration will be performed once the dam is removed, and any planned riparian and aquatic habitat enhancements will be implemented, such as creating pools, adding boulders, installing logs, and enhancing irregular edges.

Cofferdam

The temporary cofferdam would be constructed at the upstream toe of the new dam footprint, following or concurrent with completion of the outlet construction, preferably during the dry season when flows in Pacheco Creek are low. The cofferdam crest elevation is 500 feet, and was sized to ensure that flows in Pacheco Creek are maintained during construction while accommodating at least a 20-year flood event and would accommodate the 50-year flood event. Foundation preparation for the cofferdam would be similar to that for the main embankment, and would consist of over-excavation of alluvium from the valley bottom and surficial soils along the abutments. The foundation and embankment of the cofferdam would be incorporated into the dam. Material used to construct the cofferdam would be imported from the random fill borrow sources, spillway excavation, and removal of the North Fork Dam.

Embankment Construction

Initial preparation of the dam footprint will consist of clearing and grubbing of vegetation, removal of soft sediments and other deleterious materials, and shaping of the abutment side slopes. Form of slope protection may be needed to mitigate the potential for landslides and shallow-slope failures during construction. Dam foundation construction would include excavation of existing-channel alluvial materials to competent bedrock; loading and hauling excavated materials in the foundation footprint to stockpiles; cleaning of the foundation in the core and earth fill zones (zones defined in Exhibit 4); surface treatment of the impervious-core foundation by excavating shear zones and backfilling with dental concrete/grout; and set-up, mix, and installation of a cutoff wall beneath the cores (grout curtain). Materials excavated from the foundation area could be stockpiled and reused in the earth fill areas of the embankment.

Embankment construction activities would include processing, excavating, loading, hauling, placing, and compacting of impervious core, adding earth fill, and draining and filtering of materials from borrow areas. Processing materials at the borrow sites will likely include, at a minimum, moisture conditioning. Drain and filter materials are anticipated to be sourced from local commercial vendors or facilities. Additional moisture conditioning may be required at the dam site as the materials are placed and compacted. It is anticipated that up to four concurrent material placement and compaction operations could be occurring at the same time as the embankment elevation is raised.

Spillway Construction
Spillway construction will consist of completing excavation to final grades; formwork and placement of concrete for the base and walls of the entrance channel; chute and energy dissipation and stilling basin; and backfilling of walls, and final grading and erosion protection for the excavation slopes.

Types of Activities
Construction methods for dam removal and the cofferdam would consist of clearing, grubbing, stripping, and disposal of topsoil, and grading consisting of excavation of soil and rock, filling, and compacting. Construction methods for the new embankment and spillway include excavation and processing of borrow materials; hauling, placing and compacting fill and backfill; and forming and placing concrete.

1.4.4 Pump Station and Conveyance to Pacheco Conduit Construction Methods
Excavations to competent bearing material would need to be performed to construct the proposed pump station and appurtenant structures. The pump station and surge tanks are anticipated to be reinforced-concrete structures, and the electrical substation an open-graveled area with concrete mat and pedestal foundations for the electrical gear and towers. Security fencing would be required around all above-grade facilities.

A temporary and permanent construction easement would be required for the conveyance pipeline to the existing Pacheco Conduit. A potential corridor for the high-capacity electric transmission lines to the pump station could be located adjacent to the permanent easement from the pipeline. The pipeline would be constructed in an open-trench excavation and backfilled with imported bedding material and native backfill to existing grade. A series of permanent structures for appurtenances (i.e., air/vacuum valves, vaults, drains, and blowoffs) would be placed along the pipeline right-of-way. These structures would generally be below-grade and positioned directly over, or adjacent to, the conveyance pipeline.

Types of Activities
Construction methods for the pump station, surge tanks, and electrical substation would consist of excavation for basements, foundations, and building pads; preparing formwork and pouring concrete; installation of pumps and equipment; and final finishing of the interior.

Construction of the conveyance pipeline to the Pacheco Conduit would generally consist of conventional trench excavation and backfill. However, the section of the pipeline passing beneath SR 152 would be constructed using jack and bore trenchless methods.

1.4.5 Access and Staging Areas
Site access for the tunnel would include constructing new haul and access roads in conjunction with making improvements to existing roadways, as shown in Exhibit 12. Wherever possible, the alignment of these roads would follow the existing unimproved roads or four-wheel-drive trails.

The access road from SR 152 to the dam site would be about 2.74 miles long. It is anticipated that the road would eventually be completed as an approximately 40-feet wide, asphalt-paved, two-lane road. Preparing a temporary construction road with this width would allow two-way traffic during construction.

1.5 Project Operations

The expanded reservoir would be filled using a combination of 1) natural hydrology within the North Fork Pacheco Creek basin, including the East Fork, and 2) SCVWD-owned water from San Luis Reservoir under CVP contract. Historically, the natural hydrology of the North Fork Pacheco Creek watershed (upstream of the Project) yielded up to 44,000 AF/year, with an average of approximately 13,000 AF/year. These inflows are typically realized from December through March, and are affected by timing of precipitation, antecedent conditions, amount of precipitation, and evaporation. SCVWD would need to obtain a new water right from the State Water Resources Control Board (State Board).

CVP water, owned by SCVWD, will be conveyed from San Luis Reservoir to Pacheco Reservoir through the existing Pacheco Conduit. A new conveyance pipeline will connect Pacheco Conduit to Pacheco Reservoir. SCVWD will deliver CVP water to Pacheco Reservoir as needed throughout the year; however, the water will only be delivered to the SCVWD water system when SCVWD demands exceed supplies.

This Project would be operated by SCVWD to both improve habitat conditions for steelhead in Pacheco Creek and improve SCVWD water supply reliability, including during drought periods and emergencies. Table 1-2 summarizes the average monthly release targets to Pacheco Creek from the expanded Pacheco Reservoir.

Table 1-2. Average Monthly Release Targets to Pacheco Creek from Expanded Pacheco Reservoir

Month	Average Monthly Release Targets to Pacheco Creek (cfs)[1]
January	10
February	10
March	20
April	20
May	12
June	13
July	14
August	14
September	14
October	14
November	10
December	10

Notes:
[1] Releases from Pacheco Reservoir may be adjusted based on high flows in the south fork of Pacheco Creek.
Key:
cfs = cubic feet per second

The average monthly release targets shown in Table 1-2 incorporate the biological needs of the SCCC steelhead for higher flows in March and April for outmigration. The winter releases listed in Table 1-2 may be reduced depending on flows in the South Fork of Pacheco Creek. In addition, during heavy precipitation events, releases from the expanded reservoir will be reduced to minimize flooding risks along Pacheco Creek and the Pajaro River. Releases to Pacheco Conduit, to meet SCVWD water demands, may be reduced or discontinued when

storage levels in the expanded Reservoir fall below 55 TAF. This will ensure that flow and water temperatures in Pacheco Creek (below the new dam) are maintained in consecutive dry years.

1.5.1 Central Valley Project/State Water Project Operations

As part of the Project, SCVWD will transfer 2,000 AF of its CVP water contract (in below normal water years), directly or through transfer and exchanges, in perpetuity to Reclamation and USFWS' Refuge Water Supply Program (RWSP), for use in the Incremental Level 4 water supply pool for wildlife refuges. While Reclamation sets priorities for Incremental Level 4 distribution, SCVWD has expressed its desire that the transferred water be designated to refuges supported by GRCD. The water will be used to flood wetlands, directly benefiting wetland-dependent wildlife populations. The delivery schedule of this water will be flexible, but could be delivered as early as March or April. This water could be stored in San Luis Reservoir, providing the Refuge Water Supply Program greater flexibility in making late season deliveries to refuges. For deliveries to GRCD, deliveries will be made to Los Banos through the Delta-Mendota Canal.

1.5.2 Santa Clara Valley Water District Operations

SCVWD would use the Project for operational storage within their system as well as for emergency supply. SCVWD accesses its CVP contract water through the Pacheco Conduit. This Project includes construction of an inlet/outlet facility connecting to then the conduit that takes water from Pacheco Conduit to the Project as well as from the Project to Pacheco Conduit. During years when SCVWD water supplies exceed the water demands in the SCVWD service areas and excess storage capacity is available in the expanded reservoir, SCVWD would convey CVP supplies from San Luis Reservoir through Pacheco Conduit and into the expanded Pacheco Reservoir. Conveyance and storage of these CVP supplies is anticipated to occur primarily in wet years. The rate at which these transfers are made between San Luis Reservoir and Pacheco Reservoir will depend on supply allocations, water demands, and availability of other water supplies.

1.6 Project Benefits

These benefits of the Project include:

- *Ecosystem Improvements in Pacheco Creek*: The Project is expected to increase suitable habitat in Pacheco Creek for the federally threatened SCCC steelhead. The National Marine Fisheries Service (NMFS) includes the Pacheco Creek and the Pajaro River in the *South-Central California Steelhead Recovery Plan* (2013). The Recovery Plan identifies that a critical recovery action for SCCC steelhead is to ensure that the pattern and magnitude of water releases to Pacheco Creek from Pacheco Reservoir provides the essential habitat functions to support the life history and habitat requirements of both adult and juvenile life stages. The Project has the potential to provide substantive beneficial improvements to SCCC steelhead habitat conditions in Pacheco Creek through improved flow and temperature conditions. If the project is implemented, the removal of North Fork Dam would also allow for restoration of additional habitat for SCCC steelhead and other aquatic species.

- *Ecosystem Improvements in the San Joaquin River Watershed:* Increased storage capacity provided by the Project would allow SCVWD to provide up to 2,000 acre-feet of water to wildlife refuges in the San Joaquin River watershed during below normal water years. The Refuge Water Supply Program was established jointly by the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) and U.S. Fish and Wildlife Service pursuant to the Section 3406(d) of the 1992 Central Valley Project Improvement Act. As part of the Project, SCVWD will provide incremental Level 4 water supplies to the Program in below normal years, when water for environmental management is increasingly needed. The water provided to the Refuge Water Supply Project will directly benefit wetland-dependent wildlife populations.

- *Municipal and Industrial (M&I) Water Supply:* The Project is expected to provide water supply reliability benefits to help meet M&I water demands in Santa Clara County during drought periods and to address shortage due to regulatory and environmental restrictions. Through development of new local supplies and increased ability to fully utilize imported water supplies, the Project will improve water supply reliability and increase operational flexibility of regional water systems.

- *Emergency Response:* The Project is expected to provide emergency water supplies in the event of disruption in Delta water supplies. Catastrophic events in the Delta, such levees failures or an earthquake, would result in a significant disruption of imported water sources to SCVWD's service area. In an emergency situation, the Project could deliver, either directly or by exchange, water to any retail water agency served by SCVWD.

- *Flood Damage Reduction:* The Project is expected to reduce flood damages along Pacheco Creek. Flooding has historically occurred along Pacheco Creek downstream of the existing North Fork Dam. Through design of project features and incidental increased storage during the flood season, the Project has the potential to significantly reduce downstream flood flows and corresponding flood stages along Pacheco Creek.

1.7 Environmental Review

Information about the Project, and the environmental analysis will be used by several agencies as part of their decision-making process regarding regulations applicable to the Project. The Project description, location, and the potential environmental effects are contained in this Initial Study and NOP.

1.7.1 Topics to be Analyzed in EIR

Based on the potential for the proposed Project to result in significant impacts on the environment, SCVWD has determined that an EIR is the appropriate level of environmental review. The EIR will assess the proposed Project's effects on the environment, identifying potentially significant impacts and feasible mitigation measures to reduce or eliminate those impacts. An analysis of alternatives to the proposed Project will also be included in the EIR. Topics to be analyzed in the EIR, include but are not necessarily limited to the following: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology

and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, transportation and traffic, tribal cultural resources and utilities and service systems. Responses received to the NOP may modify or add to the preliminary assessment of potential issues that will be addressed in the EIR.

1.7.2 Environmental Procedures

The NOP initiates the CEQA process, through which SCVWD refines the range of issues and Project alternatives to be addressed in the draft EIR. Comment are invited on both the proposal to prepare the EIR and on the scope of issues to be included in the EIR. Please submit any comments on the NOP and scope of issues to be included in the EIR within 30 days of receipt of this notice to Melih Ozbilgin, Senior Water Resources Specialist, at SCVWD (see contact information below). After the 30-day review period for the NOP is complete and all comments are received, a draft EIR will be prepared in accordance with CEQA, as amended (Public Resources Code §21000 et seq.), and the State Guidelines for Implementation of CEQA (CCR §15000 et seq.).

Once the draft EIR is completed, it will be made available for a 45-day public review and comment period. Copies of the draft EIR will be sent directly to those agencies commenting on the NOP, and will also be made available to the public at a number of locations, including SCVWD headquarters. Information about availability of the draft EIR will also be posted on SCVWD's website (http://www.valleywater.org).

1.8 Contact Information

For further information, contact the following:

Melih Ozbilgin
Senior Water Resources Specialist
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118-3686
(408) 630-2725
mozbilgin@valleywater.org

Additional information relevant to the project, and the draft EIR, can be found at http://www.valleywater.org.

CHAPTER 2 ENVIRONMENTAL EVALUATION

2.1 Overview

Project Title:	**Pacheco Reservoir Expansion Project (Project)**
Lead agency name and address:	Santa Clara Valley Water District 5750 Almaden Expressway San Jose, California 95118
Contact person and phone number:	Melih Ozbilgin, Senior Water Resources Specialist, (408) 630-2725
Project location:	The project is located in unincorporated Santa Clara County. The project area extends from Pacheco Reservoir to Monterey Bay, following Pacheco Creek and the Pajaro River, and covering portions of unincorporated Santa Clara and San Benito Counties. USGS quadrangles in the project area include: Mustang Peak, Pacheco Peak, Pacheco Pass, Three Sisters, San Felipe, Chittenden, Watsonville East, Watsonville West, and Moss Landing.
Project sponsor's name and address:	Santa Clara Valley Water District 5750 Almaden Expressway San Jose, California 95118
Land designation:	Land zoning designations for the parcels are agricultural ranchlands. Surrounding land uses include grazing, water storage and residential.

Key:
USGS = United States Geological Survey

2.2 Environmental Factors Potentially Affected

The environmental factors checked below would potentially be affected by the Project as indicated by the checklist on the following pages.

Table 2-1. Environmental Factors Potentially Affected

X	Aesthetics	X	Agricultural and Forestry Resources	X	Air Quality
X	Biological Resources	X	Cultural Resources	X	Geology / Soils
X	Greenhouse Gas Emissions	X	Hazards and Hazardous Materials	X	Hydrology / Water Quality
X	Land Use / Planning		Mineral Resources	X	Noise
X	Population / Housing	X	Public Services		Recreation
X	Tribal Cultural Resources	X	Utilities / Service Systems	X	Mandatory Findings of Significance

2.3 Evaluation of Environmental Impacts

The degree of change from existing conditions—caused by the Project—is compared to the impact evaluation criteria, to determine if the change is significant. Where it is determined that one or more significant impacts could result from implementation of the Project, mitigation

measures would be developed to reduce or eliminate the significant impacts. Existing conditions serve as a baseline for evaluating the impacts of the Project.

The following terminology is used in this document to describe the various levels of environmental impacts associated with the Project:

- A finding of "no impact" is identified if the analysis concludes that the proposed Project would not affect a particular environmental topical area in any way.
- An impact is considered "less than significant" if the analysis concludes that the proposed Project would not cause a substantial adverse change in the environment.
- An impact would be considered to have "potentially significant" issues if the analysis concludes that the proposed Project could cause a significant environmental impact. Proposed projects that potentially produce a significant impact(s) warrant the greater level of analysis and consideration provided by an EIR.

A brief explanation is required for all answers, except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved. A "No Impact" answer should be explained when it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on project-specific screening analysis).

2.4 CEQA Environmental Checklist

2.4.1 Aesthetics

Table 2-2. Aesthetics Checklist

I. AESTHETICS: Would the project:	Potentially Significant Impact	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista		X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings with a designated scenic highway?	X		
c) Substantially degrade the existing visual character or quality of the site and its surroundings	X		
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area		X	

Environmental Setting

Pacheco Reservoir is located in the Diablo Range in southeastern Santa Clara County (see Exhibit 1). The region is characterized by rolling hills and small valleys, with occasional rock outcrop. The Reservoir exists in a landscape with few large water bodies, so the reservoir and shoreline create a sharp visual contrast to the surrounding hills and valleys.

A majority of the area surrounding Pacheco Reservoir is rural, pastoral landscape of open space. The environment surrounding the Reservoir is relatively undeveloped, consisting of a few private ranches and residences, the North Fork Dam facilities, and telephone and electricity transmission lines. Current views of the North Fork Dam are limited to the few private residential and ranching properties surrounding the reservoir.

Henry W. Coe State Park is located northwest of Pacheco Reservoir. No views of the Reservoir exist from any scenic overlooks, trails or roads within the park. The new dam and spillway would not be visible from trails or roads within the park, due to natural topography of the area. However, small portions of the reservoir may be visible from locations of Kaiser-Aetna Road, which leads to the Dowdy Ranch Area and Visitor Center.

Pacheco Reservoir is located about two miles north of SR 152, also called the Pacheco Pass Highway. Although the portion of SR 152 within Santa Clara County is not an officially designated state scenic highway, it is eligible for designation, and is included as part of the Scenic Road System of Santa Clara County (County of Santa Clara 1994, CalTrans 2017). Due to the rugged terrain, the existing dam is not within the view of SR 152. Portions of the new dam would be visible along SR 152. In addition, trees and outcroppings visible from portions of SR 152 may be impacted or removed during construction of the dam or inundated as part of the new reservoir.

Explanations for I. Aesthetics

a) Less than Significant Impact. A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape, for the benefit of the general public. The new dam forming an expanded Pacheco Reservoir will be located on Pacheco Creek near Pacheco Pass and may provide scenic views to people in the Project vicinity. However, the reservoir and existing facilities by themselves do not include remarkable landscapes elements that create scenic vistas. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts on scenic vistas that may result from construction of the Project.

b) Potentially Significant Impact. Although the portion of SR 152 within Santa Clara County is not an officially designated state scenic highway, it is eligible for designation, and is included as part of the Scenic Road System of Santa Clara County (County of Santa Clara 1994, CalTrans 2017). Santa Clara County is currently seeking official state designation of the portion of SR 152 from the Pacheco Pass to the Santa Clara County-Merced County border. Portions of the new dam would be visible along SR 152. Temporary night lighting used during Project construction may be visible from SR 152. In addition, trees and outcroppings visible from portions of SR 152 may be damaged or removed during construction of the dam or inundated as part of the expanded reservoir. Therefore, the impact is considered potentially significant. The EIR will further evaluate potential impacts on scenic resources that may result from construction of the Project.

c) Potentially Significant Impact. Construction activity—including the presence of equipment, vehicles, and construction personnel—would temporarily degrade the quality of views in the area. The impact on visual quality associated with construction would be limited to the few residential and ranching properties surrounding the reservoir. Although construction of the project would occur over multiple years, construction would occur in various sites over multiple phases, limiting the impact to surrounding residents.

Several borrow areas have been identified upstream of the existing reservoir. Preparation of these borrow areas may include removal of trees and grading. Most of the borrow areas would be inundated by the expanded reservoir. Those areas not inundated would be revegetated after use.

Implementation of the proposed Project would require complete dewatering of the existing reservoir, which would temporarily degrade the existing visual character or quality of the site. Views of the dewatered reservoir would be limited to the few residential and ranching properties surrounding the reservoir. The impacts to the visual resources from dewatering of the reservoir would be temporary, and would have limited impact on those properties.

The Project would increase the inundated area by an additional 1,245 acres. This would substantially change the scenic quality and character of the Project area. The overall visual effect of raising the water level at the reservoir would be relatively minor because substantial portions of the vegetated landscape would remain visually intact and views of the expanded reservoir would be limited. SCVWD will prepare an analysis of the potential impacts to visual resources associated with construction of the proposed Project features and future operations. Effects on the visual resources are considered potentially significant. The EIR will further evaluate potential impacts on the visual character or quality of the Project site that may result from construction of the Project.

d) Less than Significant Impact. Construction activities may require double shifts—two, 10-hour shifts per day, up to six days per week—to meet the construction schedule. Therefore, nighttime lighting may be required during the temporary construction period. Nighttime construction lighting would be directed away from the two single-family homes south of the North Fork Dam. As a result, the exposure of residents or other viewer groups to construction lighting is anticipated to be minimal, and this impact is accordingly considered less than significant.

Following construction, existing lighting would be replaced with new permanent lighting that would not substantially differ from the current lighting located at the Project site. Therefore, upon completion of construction, there would be less than significant impacts to lighting or glare that would adversely affect day or nighttime views of the area. The EIR will further evaluate potential impacts from light or glare that may result from construction of the Project.

2.4.2 Agricultural and Forestry Resources

Table 2-3. Agricultural and Forestry Resources Checklist

II. AGRICULTURAL AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use			X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	X		
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Protection (as defined by Government Code section 51104(g)?	X		
d) Result in the loss of forest land or conversion of forest land to non-forest use?	X		
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non- forest use?	X		

Environmental *Setting*

The Project is located in the sphere of influence of unincorporated Santa Clara County. A majority of the area surrounding Pacheco Reservoir is rural, pastoral landscape of open space. Predominant vegetation communities include oak woodland, with smaller areas of annual grassland, mixed chaparral, valley foothill riparian, and sycamore alluvial woodland. The land surrounding Pacheco Reservoir is privately owned and primarily used for ranching and grazing.

Explanations for II. Agricultural and Forestry Resources

a) No Impact. The majority of the Project area is located on lands designated as Grazing Land by the Farmland Mapping and Monitoring Program. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Project area. Therefore, there is no impact and the EIR will not evaluate the impact to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

b) Potentially Significant Impact. Project construction would convert agricultural ranchland to nonagricultural uses and require cancellation of lands under Williamson Act contracts. Sections of land would be temporarily converted into staging areas for construction equipment and construction activities, and may disturb existing grazing

activities. Upon completion of construction activities, the staging areas would be returned to pre-Project conditions and could be used as grazing land. However, the expanded reservoir would increase the inundated area by 1,245 acres, permanently converting some land to non-agricultural use. The new access road and other Project facilities would also permanently convert land to non-agricultural use. Therefore, the proposed Project will both temporarily and permanently conflict with existing zoning for agricultural use and the impact is considered potentially significant. The EIR will further evaluate potential impacts to Williamson Act contracts and land zoned for agricultural use that may result from construction of the Project.

c) Potentially Significant Impact. There are no timberland or timberland that is zoned Timberland Protection in the Project area. The area surrounding Pacheco Reservoir is zoned as ranchlands that support a special resource, designated as oak woodlands. This area can be defined as forest land because oak woodlands encompass 10 percent or greater of the canopy coverage. Portions of this land will be inundated by the expanded reservoir, and may be impacted by the construction of the new access, haul road and other Project facilities, resulting in both temporary and permanent impacts to land zoned as forest land. Therefore, the impact is considered potentially significant (County of Santa Clara 2011, Jones-Stokes 2003). The EIR will further evaluate potential impacts to land zoned for forest land that may result from construction of the Project.

d) Potentially Significant Impact. As described above, the area surrounding Pacheco Reservoir can be defined as forest land because oak woodlands encompass 10 percent or greater of the canopy coverage. Construction activities may result in the loss of forest land, and some forest land would temporarily be converted to non-forest uses for construction equipment staging areas. In addition, the expanded reservoir would increase the inundated area by 1,245 acres, permanently converting forest land to non-forest use. The new access road and other Project facilities would also permanently convert small parcels of land surrounding the reservoir. Therefore, the impact is considered potentially significant. The EIR will further evaluate potential impacts to forest land that may result from construction of the Project.

e) Potentially Significant Impact. As stated above, the Project could permanently convert forest land to non-forest use through the construction of the access road and haul road, and preparation of the borrow areas. Forest land may also be temporarily converted to staging areas for construction equipment. In addition, the Project has the potential to diminish agricultural land resource quality and importance because of altered and/or soil saturation. At some locations, flows from Pacheco Creek or the Pajaro River could change the duration and seasonality of inundation, or soil saturation, which could potentially affect crop production. Therefore, the impact is considered potentially significant The EIR will further evaluate potential impacts to crop production downstream of the expanded Pacheco Reservoir resulting from Project operations.

2.4.3 Air Quality

Table 2-4. Air Quality Checklist

III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of applicable air quality plans?	X		
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	X		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	X		
d) Expose sensitive receptors to substantial pollutant concentrations?		X	
e) Create objectionable odors affecting a substantial number of people?		X	

Environmental Setting

Particulate matter (PM) can damage human health and retard plant growth. PM also reduces visibility, soils buildings and materials, and causes corrosion. Health concerns associated with suspended PM focus on particles small enough to be drawn into the lungs when inhaled, generally those with a diameter of 10 microns or less (PM_{10}). Current air quality regulations recognize an additional subcategory of fine particulates with a diameter of 2.5 microns or less ($PM_{2.5}$).

The proposed Project is located within the Santa Clara Valley subregion of the Bay Area Air Quality Management District (BAAQMD). According to BAAQMD, major air pollutant of concerns in the Santa Clara Valley include ozone and $PM_{2.5}$. Due to high population density, wood smoke, traffic, and poor wintertime circulation, the Santa Clara Valley experiences many exceedences of the $PM_{2.5}$ standard each winter.

The BAAQMD region is designated nonattainment for the National Ambient Air Quality Standards (NAAQS) for ozone and $PM_{2.5}$, and the State Ambient Air Quality Standards (SAAQS) for ozone, particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$). The region is designated either attainment or unclassifiable for the remaining NAAQS and SAAQS (Bay Area Air Quality Management District 2017a).

The BAAQMD established thresholds of significance for both construction and operation of projects within their boundaries. These thresholds are contained in the BAAQMD CEQA Guidelines, issued in 1999. Although the BAAQMD issued revised thresholds and guidance in June 2010, they were subsequently challenged and set aside by the Alameda County Superior Court because they were not subjected to a CEQA evaluation prior to adoption. Regardless of this fact, SCVWD has adopted the 2010 BAAQMD thresholds for the purposes of this analysis because they were established based on substantial evidence and represent the most current and appropriate thresholds for use at this time.

For short-term construction-related emissions, quantification is not necessary and projects are assumed to be below the significance thresholds if they implement a set of basic mitigation

measures and, for larger projects such as the proposed Project, a set of enhanced mitigation measures. For long-term maintenance and operational emissions, the threshold of significance for carbon monoxide (CO) would be a contribution causing an exceedence of the SAAQS of 0 parts per million, averaged over eight hours, or 20 parts per million averaged over one hour. The long-term operational threshold of significance for reactive organic gases (ROG), nitrogen oxides (NO_x), and $PM_{2.5}$ (exhaust) is 54 pounds per day; 82 pounds per day of PM_{10} (exhaust); and zero pounds per day of local CO, accidental release of acutely hazardous air pollutants, or odors (BAAQMD 2017b).

The BAAQMD CEQA Guidelines provide that PM_{10} and $PM_{2.5}$ (fugitive dust) should be managed by best management practices (BMP).

Explanations for III. Air Quality

a) Potentially Significant Impact. Project construction activities have the potential to generate emissions from heavy equipment used during construction, as well as the generation of dust. Likely air pollutants from construction include the following: PM dust, criteria pollutants from fuel combustion, and diesel PM. Emissions generated during implementation of the proposed Project could potentially conflict with, or obstruct, implementation of the BAAQMD air quality plan. Therefore, the impact is considered potentially significant. In accordance with BAAQMD regulations, this issue will be evaluated further in the EIR. SCVWD will conduct an air quality analysis of the proposed Project to estimate and evaluate potential emissions produced by the construction and operation of the Project. Results will be compared to numeric significance thresholds. The EIR will further evaluate potential impacts to air quality that may result from construction and operation of the Project and would conflict or obstruct implementation of applicable air quality plans.

b) Potentially Significant Impact. As described above, Project construction activities have the potential to generate temporary impacts to air quality, resulting from emissions from heavy equipment used during construction. Although the construction activities would be short-term and temporary, they would have the potential to exceed thresholds of significance unless the basic and enhanced mitigation measures are incorporated into construction activities. Long-term maintenance and operation of the Project would not likely exceed the significance threshold for daily or annual emissions for ROG, NO_x, and PM_{10}. However, due to temporary emissions from construction activities, the impact is considered potentially significant. The air quality analysis conducted for the EIR would evaluate both the short-term construction and long-term operation emissions, and compare these against numeric significance thresholds. The EIR will further evaluate potential impacts to air quality that may result from construction of the Project.

c) Potentially Significant Impact. This issue will be evaluated further in the EIR based on the emissions analysis and results comparison to numeric significance thresholds. Due to potential emissions from Project construction activities, the impact is considered potentially significant. The EIR will further evaluate potential impacts that may result from construction the Project to criteria pollutants for which the Project region is in non-attainment.

d) Less than Significant Impact. Sensitive receptors within the Project area include two single family residences located approximately 1,000 feet south of the existing North Fork Dam. Construction of the Project would have the potential to expose these sensitive receptors to substantial pollutant concentrations from heavy equipment emissions and the generation of dust. However, construction-related pollutant concentrations, emissions and dust would not persist upon completion of construction. The potential for exposure to airborne pollutants will be evaluated further in the EIR. The EIR will also further evaluate potential impacts to sensitive receptors that may result from construction the Project.

e) Less than Significant Impact. Construction of the proposed Project could create objectionable odors. Construction equipment may produce diesel emissions, which could be smelled by the two single-family residences south of the North Fork Dam. However, construction-related odors would not persist upon completion of construction. The dewatering of the existing reservoir could create an objectionable odor associated with decomposing organic matter in the reservoir. However, existing operations of Pacheco Reservoir cause the reservoir to periodically go dry. Therefore, any objectionable odor caused by dewatering of the reservoir is not anticipated to be beyond existing conditions and thus the impact is considering less than significant. The EIR will further evaluate potential impacts from objectionable odors that may result from construction of the Project.

2.4.4 Biological Resources

Table 2-5. Biological Resources Checklist

IV. BIOLOGICAL RESOURCES: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or National Marine Fisheries Service?	X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or National Marine Fisheries Service?	X		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	X		
d) Interfere substantially with the movement of any native resident or migratory species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	X		

IV. BIOLOGICAL RESOURCES: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	X		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?		X	

Environmental Setting

Plants and Wildlife. The area surrounding Pacheco Reservoir is primarily undeveloped grazing land. Oak woodland comprises the majority of land cover in the vicinity of the existing reservoir, including: foothill-pine oak woodland, mixed oak woodland and forest, blue oak woodland, and valley oak woodland (County of Santa Clara 2012). Other cover types in the area include northern riparian forest and woodland, California annual grassland, and chaparral (mixed serpentine chaparral and northern mixed chaparral / chamise chaparral) (County of Santa Clara 2012).

CDFW considers mixed serpentine chaparral to be a sensitive biotic community. Relatively small areas of serpentine soils are mapped on the east side of Pacheco Reservoir, including within the proposed expanded reservoir area (County of Santa Clara 2012). Serpentine soils form from weathering of ultramafic rock containing serpentine, which results in areas of shallow, nutrient-poor, high magnesium soils that may contain levels of heavy metals (chromium and nickel) toxic to many plant species. Plants adapted to survive in these soils often occur only in limited areas, and many are special-status species. Mixed serpentine chaparral is typically more open than other chaparral types, with shrubs that are fire-adapted and tend to be shorter and have reduced, curled, or thickened leaves.

Plant species in mixed serpentine chaparral may include Calistoga navarretia (*Navarretia heterodoxa*), Santa Clara Valley dudleya (*Dudleya abramsii spp. setchellii*), Mt. Hamilton thistle (*Cirsium fontinale* var. *campylon*), smooth lessingia (*Lessingia microdemia* var. *glabrata*), and Tiberon Indian paintbrush (*Castilleja affinis spp. neglecta*), coyote ceanothus (*Ceanothus ferrisiae*), Loma Prieta hoita (*Hoita strobiliana*), and most beautiful jewel-flower (*Streptanthus albidus ssp. peramoenus*). Sensitive wildlife species, including California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), and western pond turtle (*Clemmys marmorata*), may use mixed serpentine chaparral habitat areas for movement, aestivation, or foraging habitat. Bay checkerspot butterfly (*Euphydras editha bayensis*) may move through this community type (County of Santa Clara 2012).

Sycamore alluvial woodland, also considered a sensitive biotic community by CDFW, occurs along Pacheco Creek below Pacheco Reservoir and on the North Fork of Pacheco Creek upstream of the proposed expanded reservoir. In 1992, CDFW mapped 135 acres of sycamore alluvial woodland on Pacheco Creek along SR 152, which comprised more than 5 percent of the known extent of this habitat type in the state (County of Santa Clara 2012).

Currently, water is conveyed from Pacheco Reservoir to the North Fork of Pacheco Creek. The existing dam spillway pool is a deep pool that conveys water into the North Fork Pacheco Creek. The North Fork of Pacheco Creek flows downstream from the pool into a moderately incised stream channel with good shade cover to the confluence with the South Fork of Pacheco Creek just upstream from SR 152. The mainstem reach of Pacheco Creek between confluence with the South Fork of Pacheco Creek and Casa de Fruta supports a broad, relatively undisturbed floodplain with valley foothill riparian vegetation. However, grazing has reduced riparian vegetation along the stream channel, resulting in high summer stream temperatures downstream from SR 152.

Numerous amphibian, reptile, bird, and mammal wildlife species use riparian habitats. Sensitive species such as Bay checkerspot butterfly, California tiger salamander, California red-legged frog, foothill yellow-legged frog (*Rana boylii*), western pond turtle, least Bell's vireo (*Vireo bellii psuillus*), tricolored blackbird (*Agelaius tricolor*), and San Joaquin kit fox (*Vulpes macrotis mutica*) use riparian habitat for movement, breeding, foraging, and/or refugia. California red-legged frog and western pond turtle may occur in sycamore alluvial woodland year-round.

Special-status Plants. There are no known occurrences of special-status plants in the vicinity of the Project. The special-status rock sanicle (*Sanicula saxatilis*) is known to occur at Henry W. Coe State Park. Rock sanicle is a low stout perennial herb in the carrot family. This plant species is designated as a state rare species, and has no federal special status. Other special-status species have potential to occur within the Project area, but no comprehensive surveys have been performed to date.

Special-status wildlife. Current federally and State listed special-status wildlife species that have been reported in the vicinity of Pacheco Reservoir include: California tiger salamander (federally and state listed as Threatened) and California red-legged frog (federally listed as Threatened) (California Department of Fish and Wildlife 2017). Other special-status species, such as San Joaquin kit fox, least Bell's vireo, foothill yellow-legged frog, and northwestern pond turtle are reported or suspected to occur in the area. As stated above, habitat types that may support other special-status species occur in the vicinity of the Project; therefore, special-status species that have not been previously reported may occur in the area. The EIR will further evaluate the potential presence of special-status plant and animal species in the Project area.

Impacts on individuals or habitat for special-status wildlife would require incidental take authorization from the USFWS and CDFW. Coverage for terrestrial species may also be obtained through the Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan (VHP). The Project is not a covered activity in the VHP; however, it could be added through a special major amendment procedure and conservation strategy for terrestrial covered species (County of Santa Clara 2012).

Fisheries. NMFS included the Pajaro River and Pacheco Creek in the Recovery Plan for SCCC steelhead Distinct Population Segment (DPS) (National Marine Fisheries Service 2013). In the Recovery Plan, NMFS states the critical recovery action is to ensure that the pattern and magnitude of water releases from North Fork Dam provides the essential habitat functions to support the life history and habitat requirements of both adult and juvenile life stages. The SCCC steelhead were listed by NMFS as threatened, first in 1998, and was reaffirmed in a second listing in 2005. If implemented, the Project will require Endangered Species Act (ESA)

consultation with NMFS and may require an incidental take permit from NMFS for SCCC steelhead.

Pacheco Creek. Pacheco Creek, downstream of Pacheco Reservoir, periodically supports SCCC steelhead (*Oncorhynchus mykiss*). Passage for adult and smolt steelhead is restricted in dry years; however, rearing habitat can be good in years with average and above average precipitation if Pacheco Reservoir is operated in consideration of fishery needs. In some years, the Reservoir releases are delayed until June which can cause low-flow/warm water conditions in May and associated increase in juvenile steelhead mortality. During wetter years, releases in the summer generally provide suitable flows and temperatures for rearing of steelhead. Rearing habitat is considered best closer to the dam. However, as water temperatures rise and stream flows decrease downstream from the dam, habitat quality decreases with distance from the dam.

Sacramento suckers (*Catastomas occidentalis*), hitch (*Lavinia exilicauda*), and prickly sculpin (*Cottus asper*)—all native species—have been observed in Pacheco Creek. Non-native fishes observed in Pacheco Creek—as well as ponds along Pacheco Creek, which are, at times, connected to Pacheco Creek—include largemouth bass (*Micropterus salmoides*), goldfish (*Carrasius auratus*), and common carp (*Cyprinus carpio*) (Smith pers. comm. 2017).

Pajaro River. The Pajaro River is a pathway for adult SCCC steelhead as they migrate to their upstream spawning habitat, and as juveniles migrate downstream to the ocean. The Pajaro River itself does not generally provide suitable spawning or rearing conditions for steelhead because of high summer water temperatures, low summer stream flows, and sand/silt substrate. Populations declined following the 1976-1977 and 1987-1991 droughts, which had flows that impeded fish passage. Subsequent wet years likely had increased fish numbers. The population size of steelhead using the Pajaro River is unknown.

Critical Habitat and Essential Fish Habitat. Critical habitat is present in the Project area. Critical habitat for the SCCC steelhead DPS was designated on September 2, 2005 (70 FR 52488 52630). Pacheco Creek is included in the critical habitat designation.

Essential Fish Habitat (EFH) is defined in the Magnuson-Stevens Fishery Conservation and Management Act as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. Neither the Pajaro River nor Pacheco Creek are designated EFH for Pacific salmon, which includes all species of salmon, but does not include steelhead.

Wetlands. Wetland habitat provides breeding habitat for birds and amphibians; mammals, such as the ringtail may occur at the edge of this habitat. One large patch of fresh emergent wetland is located along the floodplain immediately above the confluence of the North and East Forks of Pacheco Creek. The Pacheco Peak U.S. Geological Survey (USGS) quadrangle map shows a spring in the vicinity of this wetland; this spring may provide additional input to the wetland. Several freshwater emergent wetlands and freshwater forested/shrub wetlands are mapped by the National Wetlands Inventory on the margins of Pacheco Reservoir and its tributaries (United States Fish and Wildlife 2017). There may be more wetland habitat in the vicinity of the Project. Ponds occur throughout the area, with high density reported in the vicinity of the reservoir (County of Santa Clara 2012). Ponds can be important habitat for species such as California tiger salamander, California red-legged frog, western pond turtle, and tricolored blackbird during

much of their life cycles (County of Santa Clara 2012). The EIR process will require more detailed wetland mapping and assessment.

San Joaquin River Watershed, As part of the Project, SCVWD will, in below normal water years, provide up to 2,000 AF of water to the eight wildlife refuges in the San Joaquin River Basin of the Delta watershed that receive Incremental Level 4 water supplies. Incremental Level 4 is defined as the difference between historic annual average water deliveries (Level 2) and water supplies needed to achieve optimal waterfowl habitat management (Level 4).

Explanations for IV. Biological Resources

a) Potentially Significant Impact. The reservoir locations (existing and proposed) support habitat for several special status plant and wildlife species.

Fisheries Overview. No special-status fish species occur in or upstream from the existing Pacheco Reservoir. However, federally threatened SCCC steelhead are periodically present in Pacheco Creek, migrating through the Pajaro River into Pacheco Creek when flows are contiguous and water temperatures are not above suitable conditions for each life stage. Through improved flow and temperature conditions, the Project is expected to provide substantive beneficial improvements in the SCCC steelhead habitat conditions in Pacheco Creek through improved flow and temperature conditions.

Temporary Impacts to Fisheries in the Pacheco Creek and Pajaro River Watersheds. Potential increases in sedimentation and turbidity—resulting from increased runoff and potential hazardous materials spills associated with construction of the Project—could result in impacts on Pacheco Creek downstream of the existing North Fork Dam and the new dam; however, SCCC steelhead do not regularly occur in Pacheco Creek, so they may not be affected by construction-related effects.

Permanent Impacts to Fisheries in the Pacheco Creek and Pajaro River Watersheds. Implementation of the proposed Project is expected to result in permanent benefits to SCCC steelhead in Pacheco Creek and the Pajaro River because the Project would result in cooler water and improved flows in Pacheco Creek. Additional new habitat between the new dam and footprint of the existing North Fork Dam will be opened up to SCCC steelhead. Improvements in habitat conditions for SCCC steelhead in Pacheco Creek have been evaluated through the use of the Pacheco Creek Steelhead Habitat Suitability Model. The Pacheco Creek Steelhead Habitat Suitability Model was developed through grant funding provided by the Fisheries Restoration Grant Program, including contributing partner CDFW. An output of the Pacheco Creek Steelhead Habitat Suitability Model is a steelhead cohort score. The steelhead cohort score provides an index of the ability of Pacheco Creek to support SCCC steelhead through all life stages, based on the 15-month period in which a cohort is expected to remain in the creek (i.e., from adult migration through juvenile outmigration). Based on modeling results, the Project could significantly improve the viability of SCCC steelhead populations through improved habitat conditions in Pacheco Creek in all year types (i.e., critical, dry, below normal, above normal, wet) with a long-term average increase of 158 percent over without-Project conditions (2017).

If implemented, Project construction and operations could introduce nonnative aquatic species to Pacheco Reservoir, Pacheco Creek, and the Pajaro River. Changes in flow regime may alter the available prey base, and may result in increased interspecific (between species) and intraspecific (within a species) competition for suitable rearing feeding, spawning, and refuge habitats. Project operations could result in alterations to the channels of Pacheco Creek and the Pajaro River. As a result, fish in Pacheco Creek and the Pajaro River could be subject to potential effects related to geomorphic processes. Short-term impacts could include temporary habitat loss and displacement of representative fish species as the Creek or River channels adjust to the new operations at Pacheco Reservoir.

Impacts to Special-status Plant and Wildlife Species in the Pacheco Creek and Pajaro River Watersheds. Activities associated with the proposed Project, including inundation of the expanded reservoir, could adversely affect special-status species individuals and/or their habitats. Project activities could also directly injure or kill special-status species as a result of crushing or trampling by construction equipment. In addition, habitats for special-status species may be temporarily or permanently lost as a result of Project activities. Project activities that occur in close proximity to occupied special-status species habitats (e.g., occupied nests, roosts, or burrows) could indirectly disturb individuals to the point where they abandon those habitats. If populations of these species and suitable habitat are limited locally and regionally, these impacts would be potentially significant.

Permanent Benefits for Special-status Plant and Wildlife Species in the San Joaquin River Watershed. Water supplied to the Incremental Level 4 wildlife refuges is expected to help support special-status plant and wildlife species in the San Joaquin River watershed by increasing wetland habitat in spring and early summer. Water supply is especially scarce during these times. Species beneficially affected may include: threatened giant garter snake (*Thamnophis gigas*), western pond turtle (*Actinemys marmorata*), California red-legged frog (*Rana aurora draytonii*), California tiger salamander (*Ambystoma californiense*), western spadefoot toad (*Spea [Scapbioupus] hammondii*), Native western toads (Bufo boreas), and Sierran treefrogs (Pseudacris sierra) (CDFW 1994).

Summary. The EIR will further evaluate the potential presence of and magnitude of Project impacts on special-status plant and wildlife species. This evaluation will be based on Project-specific design and construction details to be developed during the EIR process. If the VHP is amended to include coverage of this Project, conditions will be specified under the VHP to address potential impacts to special-status plant and wildlife species. If the VHP is not amended, incidental take for special status species must be obtained through section 7 consultation or section 10 of the ESA with applicable agencies. Measures to avoid, minimize, and/or compensate for impacts to special-status wildlife and plant species would be implemented by the Project in conformance with the federal Endangered Species Act and the California Endangered Species Act (through the VHP or other processes), National Environmental Policy Act (NEPA)/CEQA requirements, and permit conditions.

b) Potentially Significant Impact. Ecologically important riparian habitat, regulated by CDFW under Section 1600 of the California Fish and Game Code, occurs within the Project site, and other sensitive natural communities designated by CDFW are known to be present near the Project site (sycamore alluvial woodland and mixed serpentine chaparral). CDFW is expected to take jurisdiction over riparian habitat associated with Pacheco Creek, Pacheco Reservoir, and their tributaries.

Impacts in the Pacheco Creek and Pajaro River Watersheds. Project construction activities, such as excavation and fill, could result in the temporary disturbance and permanent loss of riparian habitat and other sensitive natural communities. Project operations, including inundation, is anticipated to result in permanent loss of riparian habitat. This impact is considered potentially significant because it could result in temporary degradation and permanent losses of these communities and habitats.

Changes in hydrology in Pacheco Creek and the Pajaro River downstream of the expanded reservoir could impact riparian habitat adjacent to these water bodies, including areas of sycamore alluvial woodland. Flooding is an important ecological function in riparian areas that introduces minerals and organic matter in soils and allows for seed dispersal and regeneration of species such as California sycamore, white alder, and black willow (County of Santa Clara 2012). The potential for greater flows downstream of the reservoir during the growing season could result in beneficial effects on riparian habitats.

Impacts in the San Joaquin River Watershed. As described above, the Incremental Level 4 wildlife refuges in the San Joaquin River Watershed provide important habitat to a number of migratory waterfowl, amphibian, and reptilian species. The provision of water to the wildlife refuges in below normal water years could support riparian and wetland habitats in the San Joaquin River watershed. Therefore, potential impacts to riparian habitat in the San Joaquin River watershed are considered beneficial.

The EIR will further evaluate this impact based on additional mapping of riparian habitat and other sensitive natural communities and an analysis of the potential for construction activities to impact riparian habitat and special status natural communities based on Project-specific design, construction, and operations details to be developed during the EIR process.

c) Potentially Significant Impact. Wetlands and other waters of the U.S. are regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). Waters of the state are protected by the Regional Water Quality Control Board (RWQCB), under the Porter-Cologne Water Quality Control Act, and impacts to the beds and banks of streams, lakes, and ponds are regulated by the CDFW under Section 1600 of the California Fish and Game Code. The entire reservoir, up to the elevation of the spillway crest, is expected to be considered jurisdictional waters of the U.S. by the USACE and waters of the state by the RWQCB. The National Wetlands Inventory maps wetlands adjacent to the reservoir, and other unmapped wetlands are likely to be present in the vicinity of the reservoir.

The majority of the jurisdictional areas within the reservoir are non-vegetated "other waters." A formal jurisdictional delineation of the Project site will be conducted as part of the EIR process for the proposed Project.

Temporary and Permanent Impacts in the Pacheco Creek and Pajaro River Watersheds. Activities associated with the proposed Project could result in temporary and permanent disturbance of jurisdictional wetland and aquatic communities, which provide habitat for fish and wildlife. Project activities could result in the placement of fill, hydrological interruption (e.g., dewatering or diversion), alteration of bed and bank, degradation of water quality (e.g., increased sedimentation and turbidity), and other direct impacts. The activities would primarily result in the temporary loss and disturbance of wetlands and aquatic habitats.

Impacts to wetlands and other waters are considered significant because they would result in temporary degradation and limited permanent losses of ecologically valuable wetlands and aquatic habitats—including jurisdictional wetlands and other waters—and temporary disruption of stream continuity during Project activities within the Pacheco Creek channel.

Impacts in the San Joaquin River Watershed. The Project's dedication of firm water supplies to Incremental Level 4 wildlife refuges in the San Joaquin River watershed could provide up to 1,000 acres of wetland habitat during periods where pressure on available habitat is significant. Therefore, potential impacts on protected wetlands in the San Joaquin River watershed are considered beneficial.

The EIR will further evaluate the magnitude of impacts of construction activities and Project operations on wetlands and waters. This evaluation will be based on Project-specific design and construction details to be developed during the EIR process.

d) Potentially Significant Impact.

Fisheries. The construction of the Project could temporarily disrupt the movement of fish species in Pacheco Reservoir and in Pacheco Creek downstream of both the existing North Fork Dam and the proposed new dam.

Pacheco Reservoir. The Reservoir drawdown would result in dewatering, and would result in fish losses except for any fish able to swim into creeks still flowing into the reservoir bed. The combined reduction in habitat availability and water quality with the dewatered reservoir would result in a negative impact on the reservoir fishery, including any native resident fish that may reside in the reservoir.

Pacheco Creek Downstream of Pacheco Dam. Reduced water quality, discharged from the reservoir as a result of dewatering, has the potential for adverse impacts on fish in Pacheco Creek. A dewatering plan will be developed, and is subject to approval from regulatory agencies. Additionally, discharges from Project construction activities such as tunneling, could contain elevated levels of turbidity.

The stream channel, within the footprint of the existing reservoir, will be restored between the new dam and the existing dam (which will be removed). The channel will be designed to reduce streambank erosion (e.g., using bank stabilizing materials), and riparian vegetation will be planted to initiate growth of a new riparian forest along the new channel. Where feasible, mitigation measures will be prescribed to reduce impacts to less than significant levels.

Wildlife Movement Corridors and Native Wildlife Nursery Sites in the Pacheco Creek and the Pajaro River Watersheds. Within the Project site, natural habitats (e.g., riparian, oak woodlands, chaparral), streams (e.g., Pacheco Creek and its tributaries), and the shorelines of Pacheco Reservoir may function as pathways for terrestrial wildlife movement. Additionally, the Project area provides nesting site for migratory birds and raptors. Project activities are expected to cause both temporary and permanent impacts to wildlife movement in these areas.

Temporary dewatering of Pacheco Reservoir would result in both beneficial and negative effects for terrestrial wildlife movement. Because more upland habitat would be available for use by these species, mammals may more easily cross the reservoir area in a dewatered condition. However, because terrestrial wildlife may have to travel longer distances to water, predation risk may increase. These effects would also apply to other dispersing or migrating wildlife species, such as reptiles and amphibians. Noise and disturbance associated with construction activities could cause species that commonly use habitats in the Project vicinity to disperse to at least temporarily avoid disturbances through the Project area. After construction activities are complete, the expanded reservoir would create a larger permanent barrier to animal movement through the area than the existing reservoir. It would also inundate land that was previous used for wildlife movement.

Impacts in the San Joaquin River Watershed. The Project's dedication of firm water supplies to Incremental Level 4 wildlife refuges in the San Joaquin River watershed could provide for waterfowl habitat optimization. This could include spring and early-summer irrigation of wetlands for forage-crop production and habitat for waterfowl and other non-migratory avian species. Therefore, potential impacts to migratory species in the San Joaquin River watershed are considered beneficial.

The EIR will further evaluate the magnitude of impacts of construction activities and Project operations on the movement of native wildlife species or established wildlife corridors and wildlife nursery sites. This evaluation will be based on Project-specific design and construction details and consideration of the various types of species that currently move through and use the Project site.

e) Potentially Significant Impact. Project construction activities will be limited to the area around Pacheco Reservoir, located in unincorporated Santa Clara County, and Pacheco Pumping Plant near San Luis Reservoir, located in unincorporated Merced County. The County of Santa Clara Tree Preservation and Removal Ordinance (County Code, Section C16.1 to C16.17) serves to protect all trees having a trunk that measures 95.8 centimeters (37.7 inches) or more in circumference, or a diameter of 30 centimeters (12 inches), at a height of 1.4 meters (4.5 feet) above the ground or immediately below the

lowest branch, whichever is lower. In the case of multi-trunk trees, a trunk size of 191.5 centimeters (75.4 inches) in circumference, or a diameter of 70 centimeters (24 inches), is protected by the code. In addition, any tree that, because of its history, girth, height, species, or other unique quality is considered significant to the community or recommended by the historic commission can be designated as a heritage tree to be protected and served. Ordinance trees are defined based on the applicable local ordinance (i.e., County of Santa Clara Tree Preservation and Removal Ordinance), unless an agreement between SCVWD and a municipality states otherwise.

Ordinance-sized trees occur on the Project site in upland areas (e.g., oak woodlands) and within the riparian habitats along Pacheco Creek, where tree removal would be necessary to construct the new dam or would be inundated during Project operations. Therefore, Project activities would likely result in the permanent loss of ordinance-sized trees.

The 2030 Merced County General Plan (2013) identifies the development of an Oak Woodland Ordinance as a policy for the protection of biological resources. However, at this time, no such policy has been adopted by Merced County. If a policy is adopted prior to Project construction, SCVWD will follow all applicable local regulations and guidelines related to the removal of trees near Pacheco Pumping Plant.

This impact is considered potentially significant because it could result in permanent loss of ecologically valuable trees. The EIR will further evaluate this impact, based on the mapping of ordinance-sized trees and an analysis of the potential for construction activities to impact ordinance-sized trees, based on Project-specific design and construction details to be developed during the EIR process.

f) Less than Significant Impact. No other habitat conservation plans (HCP) have been approved, or are in preparation, for the Project site, and aside from the VHP, no other Natural Community Conservation Plans (NCCP) in Santa Clara County have been approved or are in preparation (CDFW 2016). If the VHP is amended to include expansion of Pacheco Reservoir, the proposed Project will comply with the conditions of the VHP. If the VHP is not amended to include the proposed Project, federal Endangered Species Act and California Endangered Species Act consultation and compliance would be addressed through a separate mechanism and would not impact the existing HCP. Therefore, the proposed Project would not conflict with the VHP or any other adopted HCPs or NCCPs, or with any other approved local, regional, or state HCPs, and thus the impact associated with conflicts between the Project and any adopted HCP or NCCP would be less than significant. The EIR will further evaluate whether potential impacts that may result from the Project would conflict with the provisions of any HCP or NCCP.

2.4.5 Cultural Resources

Table 2-6. Cultural Resources Checklist

V. CULTURAL RESOURCES: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X	
d) Disturb any human remains, including those interred outside of formal cemeteries?	X		

Environmental Setting

The Project is located in the southeast portion of Santa Clara Valley along Pacheco Creek. Archaeological evidence for the South Santa Clara Valley suggests that it has been inhabited for at least 4,200 years (Santa Clara Valley Water District 2008). Until about 2,500 years ago, populations were non-permanent, and seasonally moved out of the South Santa Clara Valley to take advantage of resources in coastal and inland California (Santa Clara Valley Water District 2008). Pacheco Pass was used as a passage to the coast, primarily by the Costanoan Indians, of Ohlone.

A significant portion of archaeological resources may lie buried beneath the alluvial fans and floodplains that form the valley floors of the Project area. Although such buried resources cannot be detected during a traditional archaeological surface survey, it is possible to distinguish which areas of the modern landscape have potential for buried resources and which landforms are either too old to contain such archaeological remains or which were formed by processes that are unlikely to have preserved intact cultural remains.

Explanations for V. Cultural Resources

a) Potentially Significant Impact. There is the potential that historic resources could be located in the Project area. The exact age and potential historic significance of structures in the project area is unknown. Project construction activities and the inundation of an expanded Pacheco Reservoir could damage or destroy such resources. SCVWD will conduct further surveys as part of the EIR to determine the eligibility of the structures in the Project area as historic resources. The impact to historical resources is considered potentially significant. The EIR will further evaluate potential impacts to historical resources that may result from construction of the Project.

b) Potentially Significant Impact. The inundation of an expanded Pacheco Reservoir would likely destroy numerous, significant archaeological resources. The proposed Project will require investigation of an archaeological Area of Potential Effect, to accommodate construction needs to incorporate borrow, staging, and spoil disposal areas and the increased reservoir inundation area. While most of these areas may have been subject to prior impacts, those locations with potentially intact soils will require study. If cultural resources are identified in the Project area and cannot be avoided by

the Project, then they must be evaluated for listing on the National Register of Historic Places. If an eligible property cannot be avoided, then impacts to the resource must be mitigated. Such mitigation would likely consist of data recovery excavations. The impact to archaeological resources is considered potentially significant. The EIR will further evaluate potential impacts to archaeological resources that may result from construction of the Project.

c) Less Than Significant Impact.

Paleontological Resources. Activities that cause surface disturbance in areas not previously subject to disturbance, have the potential to uncover paleontological resources (similar to the activities described above that could affect archaeological resources). Construction activities and exploratory work all have some potential to unearth paleontological resources.

It appears that greywacke and mélange units of the Franciscan Assemblage, typical of the Yolly Bolly Terrain (Wentworth 1999), underlie the entire potential reservoir site (Dibblee 2007). All components of the proposed Project would be constructed on Franciscan Complex substrate, locally overlain by a thin veneer of Quaternary materials, principally active alluvium and colluvium. Given the deep-water sedimentary depositional and tectonic environments represented by the Franciscan Complex, fossil preservation is poor (Hanson 2004). Radiolarian cherts are present in the vicinity of the reservoir, but no megafossils are known (Wentworth 1999).

Overall, the paleontological sensitivity of the Franciscan Complex in the Project area is low; therefore, the Project area is considered unlikely to contain significant paleontological resources. The impact is considered less than significant.

Unique Geologic Formations. Geologic formations, and in this case assemblage (being a tectonic rather than time-lithostratigraphic deposit) their structure and the rocks in them provide information about past geologic conditions. Therefore, rocks may be of scientific, educational, or recreational value. For these reasons, typical adverse impacts to unique geologic features include material impairment through destruction, permanent covering, or alteration.

The geologic assemblage units that occur in the vicinity of the Project site are not exclusive locally or regionally, and they are not representative of a type locality of a geologic deposit. The Project, as designed, would not materially impair a unique geologic feature by destroying or altering those physical characteristics that convey the uniqueness of the resource. Therefore, the impact to unique geologic formations is considered less than significant.

The EIR will further evaluate potential impacts to unique paleontological resources or unique geologic features that may result from construction of the Project.

d) Potentially Significant Impact. There are no known burial locations within the Project area. Nonetheless, there is a potential to unearth previously unidentified human remains during ground disturbing activities. In the unlikely event that human remains are

encountered during Project construction activities, work shall halt in the immediate vicinity in accord with the State Health and Safety Code Section 7050.5. Along with notifying the Project archaeologist, the County coroner must also promptly be contacted to determine the origin and disposition of the remains pursuant to Public Resources Code Section 5097.98. If the human remains are determined to be prehistoric Native American, the coroner will notify the Native American Heritage Commission (NAHC) within 24 hours. The commission will assign and contact the Most Likely Descendant who will be responsible for making recommendations concerning the disposition of the remains. The archaeologist will assist with compliance of the Native American Graves Protection and Repatriation Act. The impact is considered potentially significant. The EIR will further evaluate potential for the disturbance of human remains that may result from construction of the Project.

2.4.6 Geology and Soils

Table 2-7. Geology and Soils Checklist

VI. GEOLOGY AND SOILS: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death related to:			
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X
ii) Strong seismic ground shaking?	X		
iii) Seismic-related ground failure, including liquefaction?		X	
iv) Landslides?	X		
b) Result in substantial soil erosion or the loss of topsoil?	X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X	
d) Be located on expansive soil, as defined in Table 18- 1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?			X

Environmental Setting

The Project site is located within the Diablo Range portion of the Coast Ranges Geomorphic Province. This province is characterized by northwest-trending mountain ranges and valleys bordered on the west by the Pacific Ocean and on the east by the Great Valley Geomorphic Province. The Diablo Range is a broad anticlinorium with a core comprised largely of Franciscan Assemblage subduction sequence sedimentary rocks that have been folded, sheared and mildly metamorphosed. The overall fabric of the Coast Ranges is a reflection of the

greater San Andreas fault system, a complex system of primarily northwest-trending, right lateral, strike-slip faults.

Explanations for VI. Geology and Soils

a) i) No Impact. While the Franciscan Assemblage is commonly much fractured and internally sheared, there are no known active or significant inactive faults in proximity to the proposed Project site capable of ground surface rupture. Therefore, there is no impact and the EIR will not evaluate the potential for the Project to expose people or structures to a known earthquake fault.

a) ii) Potentially Significant Impact. Strong ground shaking in the Project area can be expected over the life of the Project from any of several active faults in the region. Active faults of the San Andreas system closest to the project area and capable of producing strong ground shaking include the San Andreas (approximately 20 miles southwest), Sargent (approximately 14 miles southwest), Calaveras (approximately 10 miles southwest), Quien Sabe (approximately 9 miles southwest) and the Ortigalita (approximately 8 miles east). To the east are potentially-active segments of the San Joaquin fault system a west-dipping blind thrust fault that defines generally the boundary between the Coast Ranges and Great Valley provinces.

In general, ground shaking produced on the Ortigalita fault is expected to govern the seismic design of the dam. This fault is capable of producing a maximum credible earthquake of magnitude 6.9. Therefore, the impact is considered potentially significant. The EIR will further evaluate potential of the Project to expose people or structures to strong seismic ground shaking.

a) iii) Less than Significant Impact. Liquefaction is the temporary transformation of saturated and very low cohesion or cohesionless soils into a viscous liquid as a result of strong ground shaking. Liquefaction may occur in water-saturated sediment during moderate to great earthquakes. Liquefied sediment loses strength and may fail; causing damage to structures.

The majority of the Project area is situated on Mesozoic bedrock units that are not subject to liquefaction. Quaternary alluvial sediments deposited in the Pacheco Creek channel may be susceptible to liquefaction during strong ground shaking. These potentially liquefiable materials would be removed during Project development and replaced with compacted soil materials in accordance with all relevant provisions of the current DSOD and Uniform Building Codes/California Building (UC/BC) Code standards. With these provisions in place, risks would be minimized to the extent feasible.

With these provisions in place, the impact is considered less than significant. The EIR will further evaluate potential of the Project to expose people or structures to seismic-related ground failure.

a) iv) Potentially Significant Impact. Several regional-level geologic mapping programs have been conducted in the Pacheco Pass area. Numerous large landslides and landslide complexes have been mapped in the dam and reservoir areas. A large landslide complex, encompassing approximately 300 acres, has been identified in close

proximity to the downstream side of the proposed left dam abutment. A smaller (approximately 35 acre) landslide has been identified in proximity to the upstream side of the left dam abutment. In both cases, the lateral and vertical extent of these landslide features in the vicinity of the dam footprint will require careful assessment to determine their actual extent. The stability of any landslides within the dam footprint will require careful stability analysis.

Interim plans have been made to use some of the landslide deposits as borrow areas for dam construction. One of the major considerations that will determine the feasibility of a dam at this location is the local availability of fine-grained materials that may be used as the low-permeability core of the dam. Landslides in the area may provide the necessary fine-grained materials. Landslide deposits may also be used as sources for fill to construct the earthen upstream and downstream dam shells. Landslides within the Project area will need to be investigated as part of design efforts, to verify adequate materials are available of the quality and quantity needed to construct a new dam. Site preparation activities may also include stabilization of potential or active landslide areas, where these areas will not be removed or stabilized during borrow excavation activities. Therefore, the impact is considered potentially significant. The EIR will further evaluate potential for the Project to expose people or structures to landslides.

b) Potentially Significant Impact. The proposed Project would involve construction earthwork that would require removal of topsoil, alluvium, landslide materials and weathered bedrock. Notably, proposed excavation, associated with borrow mining activities and dam embankment construction, could have the potential to remove substantial quantities of intact erodible earth materials from areas undisturbed by previous development.

Construction activities and reservoir-level fluctuations would have the potential to contribute to accelerated soil erosion. During construction, clearing, grubbing, and grading activities would remove ground cover, and expose and disturb soil on slopes. Exposed and disturbed soil would be vulnerable to erosion from runoff during construction, with soil particles becoming entrained in the runoff. A stormwater pollution prevention plan (SWPPP) would also be required, providing an additional regulatory mechanism to ensure effective erosion control during construction. With erosion control, BMPs and SWPPP compliance impacts related to accelerated erosion during construction are expected to be less than significant.

Altered drainage patterns on site, as a result of construction, could also cause redirection and concentration of runoff, potentially further exacerbating the erosion problem. However, SCVWD routinely implements extensive erosion and sediment control BMPs. Exposed soils within the work area would be stabilized following the completion of earthmoving activities. Erosion control BMPs, such as silt fences, straw hay bales, gravel or rock-lined ditches, water check bars, broadcasted straw, hydroseeding, or other suitable measures would be implemented consistent with SCVWD's SWPPP requirements.

Upon completion of construction activities, any temporary facilities would be demobilized and site restoration measures would be implemented to minimize soil erosion. Erosion

resulting from reservoir fluctuations would be contained by the reservoir and could be minimized through management of reservoir-level operations.

Serpentinite rock, common in the Franciscan Assemblage, has not been identified within the Project area. Should such sensitive rock deposits be encountered, removal of erodible earth materials in undisturbed areas would be considered potentially significant.

The EIR will further evaluate potential impacts to soil erosion or loss of topsoil that may result from construction of the Project.

c) Less Than Significant Impact. As discussed above, under items a.iii) and a.iv), liquefaction and landsliding present potentially significant impacts to the project without mitigation.

Lateral spread or flow are landslides that commonly occur on gentle slope, and they have a rapid, fluid-like flow movement, typically as a result of pore pressure build-up or liquefaction in a shallow deposit during an earthquake. Within the project area, alluvial sediments overlying the Pacheco Creek valley floor could be subject to lateral spreading during a seismic event. As discussed above, these alluvial sediments would be removed during Project development and replaced with compacted soil materials in accordance with all relevant provisions of the current DSOD and Uniform Building Codes/ California Building Code standards. With these provisions in place, risks would be minimized to the extent feasible.

Subsidence is a diverse form of ground failure, ranging from small or local collapses to broad regional lowering of the ground surface. Causes of subsidence include dewatering (oxidation) of peat or organic soils, dissolution in limestone aquifers (karst), first-time wetting of moisture-deficient low-density soils (hydrocompaction), natural compaction, liquefaction, crustal deformation, subterranean mining, and withdrawal of fluids (e.g. groundwater, petroleum, geothermal). The Project area is underlain by relatively thin layers of soil/colluvium (on valley flanks) or streambed alluvium. These materials are, in turn, underlain by bedrock of sheared shales (mélange) and cemented sandstone (greywacke). No peat or organic-rich soil, limestone, subterranean mining or fluid withdrawal activities have been identified within the Project region. Low-density alluvial materials potentially capable of natural compaction or liquefaction would be removed during construction of the Project and thus would not be a factor. Crustal deformation is typically a broad regional effect and given the scale of the Project, is not considered a potential issue. As such, there is no evidence of any of the likely causes of subsidence within the Project area. Therefore, there is no evidence of any of the likely causes of subsidence.

Collapsible soils are dry, loose, low-density materials possessing a structure that collapses and compacts under the introduction of water or excessive loading. Common throughout the southwest, collapsible deposits typically consist of young alluvial fans, debris flow sediments, and wind-blown sediments (loess). Soil collapse occurs when deep saturation weakens the clay bonds that holds the soil structure together. Within the Project area, there is no evidence of any of the likely collapsible deposits susceptible to collapse. The impact is considered less than significant. The EIR will further evaluate

potential impacts from on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse that may result from construction of the Project.

d) Less Than Significant Impact. Expansive soils (reactive soils) contain a relatively high percentage of clay minerals possessing the potential to shrink and swell with changing moisture conditions. The main soil types found in the vicinity of the Pacheco Dam and Reservoir site, based on the Natural Resources Conservations Service (http://websoilsurvey.nrcs.usda.gov) for the southeastern Santa Clara County area (Natural Resources Conservations Service 2017), are characterized by the presence of the following soil units:

- **Cortina very gravelly loam** – floodplain deposit derived from metamorphic and sedimentary rock, excessively drained, low to medium expansion potential;
- **Gaviota loam and gravelly loam** – blankets mountain slopes, residuum weathered from sandstone and/or shale, well drained, low expansion potential;
- **Los Gatos/Gaviota loam complex** – blankets mountain slopes, residuum weathered from sandstone, well drained, medium expansion potential;
- **Pleasanton gravelly loam** – alluvial fan deposits at toe of slopes, well drained, low to medium expansion potential;
- **Riverwash** – riverbed deposits of sand, coarse sand and sandy loam, low expansion potential;
- **Rock land** – alluvium or residuum on mountain slope, excessively drained, low expansion potential; and
- **Vallecitos loam and rocky loam** – blankets mountain slopes, residuum weathered from shale, well drained, medium to high expansion potential.

Los Gatos/Gaviota soils of medium expansion potential are found in the vicinity of the proposed Project Area. Within the rest of the Pacheco Creek area, approximately 50 percent of the area consists of the medium to high expansion potential Vallecitos soil units and about 40 percent of the low expansion potential Gaviota soil units (Natural Resources Conservations Service 2017). Structural foundation locations would be evaluated for expansion potential during design investigations, and any potential highly expansive soil materials would either be removed and replaced with low expansion potential materials, or the foundation system would be designed to resist shrink/swell movements. The impact is considered less than significant. The EIR will further evaluate potential impacts from expansive soil that may result from construction of the Project

e) No Impact. No septic tanks or alternative wastewater disposal systems would be installed as part of the Project. Therefore, there is no impact and the EIR will not evaluate the impacts related to soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal system.

2.4.7 Greenhouse Gas Emissions

Table 2-8. Greenhouse Gas Emissions Checklist

VII. GREENHOUSE GAS EMISSIONS: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	X		
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purposed of reducing the emissions of greenhouse gases?	X		

Environmental Setting

Climate change results from the accumulation in the atmosphere of greenhouse gas (GHG) emissions, produced primarily by the burning of fossil fuels for energy. These man-made GHG are widely accepted in the scientific community as contributing to global warming.

While some of the increase is explained by natural occurrences, *Climate Change 2007: The Physical Science Basis: Summary for Policymakers* (Intergovernmental Panel on Climate Change 2007) asserts that the increase in temperature is very likely (approximately 90 percent) due to human activity, most notably the burning of fossil fuels. For California, similar effects are described in *Our Changing Climate: Assessing the Risks to California by the California Climate Change Center* (California Climate Change Center 2006).

Because GHGs (CO_2, methane, and nitrous oxide) persist and mix in the atmosphere, emissions anywhere in the world affect the climate everywhere in the world. Consequently, GHG emissions that contribute to climate change result in a worldwide cumulative impact (global warming), rather than a local or regional project-specific impact typically associated with criteria pollutants. Impacts related to GHG emissions are discussed in the context of the proposed Project's contribution to statewide and global GHG emissions.

The California Global Warming Solutions Act of 2006 (AB 32) established a comprehensive program of regulatory and market mechanisms to achieve reductions in GHGs that are quantifiable, real, and cost-effective. The Act directs responsibility for monitoring and reducing GHG emissions to the Air Resources Board (ARB). Among the most significant components of AB 32 is the requirement to reduce carbon emissions in California to 1990 levels by the year 2020.

The BAAQMD developed CEQA guidelines, in 1999 and 2010, to assist local jurisdictions in evaluating potentially adverse impacts on air quality. The 1999 CEQA guidelines provided thresholds for air quality emissions, but did not provide thresholds for GHG emissions. In 2010, BAAQMD adopted air quality guidance which included quantitative thresholds of significance and recommended BMPs and mitigation measures for GHG emissions, among other pollutants. The thresholds were challenged in court. Following litigation in the trial court, the court of appeal, and the California Supreme Court, all of the thresholds were upheld. However, in an opinion issued on December 17, 2015, the California Supreme Court held that CEQA does not generally require an analysis of the impacts of locating development in areas subject to

environmental hazards unless the Project would exacerbate existing environmental hazards. The Supreme Court also found that CEQA requires the analysis of exposing people to environmental hazards in specific circumstances, including the location of development near airports, and schools near sources of toxic contamination.

In view of the Supreme Court's opinion, BAAQMD has indicated that local agencies may rely on thresholds designed to reflect the impact of locating development near areas of toxic air contamination, where such an analysis is required by CEQA, or where the agency has determined that such an analysis would assist in making a decision about the Project. However, the thresholds are not mandatory, and agencies should apply them only after determining that they reflect an appropriate measure of a Project's impacts. The SCVWD has adopted the 2010 BAAQMD thresholds for the purposes of this analysis because they were established based on substantial evidence and represent the most current and appropriate thresholds for use at this time.

Explanations for VII. Greenhouse Gas Emissions

a) Potentially Significant Impact. The Project would generate temporary construction-related GHG emissions, with most of the emissions generated by off-road heavy construction equipment, materials hauling, and daily construction worker trips. The long-term operation of the Project, however, would not differ substantially from baseline conditions, and as such would not generate substantial new or altered sources of GHGs emissions. Any potential impacts from GHG generation during construction would be short-term and temporary, but could be significant. Project operation could result in increased GHG emissions through increased long term pumping of water to Pacheco Reservoir from Central Valley Project (CVP) facilities. These issues will be evaluated further in the EIR, which will quantify emissions and compare them to numeric significance thresholds. The impact is considered potentially significant. The EIR will further evaluate potential impacts from generation of greenhouse gas emissions that may result from construction of the Project

b) Potentially Significant Impact. Construction of the proposed Project would generate temporary short-term GHG emissions. Long-term operation of the Project could have a negative impact on GHG emissions due to increased long term pumping of water to Pacheco Reservoir from CVP facilities. Periodic maintenance activities would be incorporated into existing SCVWD maintenance schedules and would, therefore, result in a negligible change to vehicle miles traveled and GHG emissions.

Emissions generated during Project construction could be significant. This issue will be evaluated further in the EIR, which will quantify emissions and compare them to numeric significance thresholds.

2.4.8 Hazards and Hazardous Materials

Table 2-9. Hazards and Hazardous Materials Checklist

VIII: HAZARDS AND HAZARDOUS MATERIALS: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Create a significant hazard to the public or the environment through the routine transport, use, storage or disposal of hazardous materials?	X		
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one- quarter mile of an existing or proposed school?			X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	X		
e) Create a significant hazard to the public or the environment from existing hazardous material contamination on site or nearby?	X		
f) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a substantial safety hazard for people residing or working in the project area?			X
g) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			X
h) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		X	
i) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?		X	

Environmental Setting

The Project site is on land owned by PPWD and private property owners. Surrounding land uses include grazing lands and single-family rural residences. The nearest airport to the Project site is the Frazier Lake Airpark in Hollister, located approximately 15 miles from the Project area. The nearest school is Pacific Point Christian School, which is located approximately 19 miles southwest of the Project area at 2220 Pacheco Pass Highway, Gilroy.

According to the California Environmental Protection Agency, the provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List." The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with CEQA. The Cortese List, which includes the resources listed below, was reviewed for references to the proposed Project site:

- List of Hazardous Waste and Substances Sites from the Department of Toxic Substances Control (DTSC) EnviroStor database

- List of Leaking Underground Storage Tank Sites from the State Board GeoTracker database

- List of solid waste disposal sites identified by the State Board with waste constituents above hazardous waste levels outside the waste management unit

- List of "active" Cease and Desist Orders and Cleanup and Abatement Orders from the State Board

- List of hazardous waste facilities subject to corrective action identified by DTSC

Explanations for VIII. Hazards and Hazardous Materials

a, b) Potentially Significant Impact. Implementation of the Project would potentially require the routine transfer, use, storage, or disposal of hazardous materials. During construction, hazardous materials typically associated with proposed construction activities, such as fuel, oil, explosives and lubricants would be employed in the Project and staging areas. Operation of intake valves and gates would require hydraulic fluids, typically oil.

However, the Project would utilize non-hazardous hydraulic fluids for hydraulic systems for the upstream valves and gates if feasible. If this is not feasible, then all hydraulic systems would be separated from reservoir and creek waters such that preventative maintenance can occur with no risk of spills, and if spills were to occur, they would be contained and separate from receiving waters. SCVWD would comply with all relevant federal, state, and local statutes and regulations related to transport, use, storage, or disposal of hazardous materials, and all materials designated for disposal would be evaluated for appropriate state and federal hazardous waste criteria. Construction and operation activities would also incorporate best management practices such as hazardous materials storage and handling practices; vehicle and equipment maintenance, storage, and operation measures; maintenance of on-site spill control kits; stormwater pollution prevention plan development, and worksite housekeeping measures. These measures would minimize the potential release of hazardous materials into the wetlands/waterways resulting from the routine use, storage, or disposal of hazardous materials. Therefore, impacts related to the transport, use, storage, or disposal of hazardous materials would be less than significant, and the proposed Project is not anticipated to create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

The improper use, storage, handling, or disposal of hazardous materials could allow hazardous releases from equipment or through other means during project construction or operation activities, thereby exposing construction workers and SCVWD personnel to hazardous materials. There could also be accidental or intentional acts of destruction, including releases of hazardous materials that would contaminate soil or degrade water quality. SCVWD will utilize the appropriate BMPs to reduce the potential impact of the Project from hazardous materials releases to people and the environment. Therefore, the impact is considered potentially impact. The EIR will further evaluate potential

impacts from the routine transport, use, storage, or disposal of hazardous materials or release of hazardous materials that may result from construction of the Project

c) No Impact. There are no existing or proposed city-operated schools within one quarter mile of the proposed Project, therefore there would be no impact on public safety hazards related to schools. Therefore, there is no impact and the EIR will not evaluate the impacts related to the emission of hazardous materials or waste within one-quarter mile of an existing or proposed school.

d, e) Potentially Significant Impact. The proposed Project is not currently included on any list of hazardous materials sites. Based on a review of readily ascertainable public information for the site and vicinity, there is no existing hazardous material contamination on site or nearby. However, there is the potential for discovery of previously unknown contamination during ground excavation activities. If hazardous levels of contaminants are encountered, a significant impact on construction workers, the public, and environment could result. Therefore, the impact is considered potentially significant. The EIR will further evaluate potential impacts from hazardous materials or hazardous materials contamination that may result from construction of the Project

f, g) No Impact. There are no airports or airport land use plans established within two miles of the proposed Project, therefore there would be no impact on public safety hazards related to airports. The EIR will not evaluate the impacts of the emissions of hazardous materials on public airports or private airstrips.

h) Less than Significant Impact. Increased traffic, short-term lane closures, and detours on SR 152 during construction could have the potential to interfere with implementation of emergency response plans. However, because SCVWD would comply with all adopted emergency response plans and other measures as required by Santa Clara County and California Department of Transportation (CalTrans) during construction activities to ensure that appropriate safety measures are in place in the event of an emergency impacts would be less than significant. See also Section 2.4.16 Transportation/Traffic. The EIR will further evaluate potential impacts to emergency response plans and emergency evacuation plans that may result from construction of the Project.

i) Less than Significant Impact. According to the California Department of Forestry and Fire Protection (CalFire) map of Fire Hazard Severity Zones in Santa Clara County, the majority of the Project site is located in areas considered as either “High” or “Very High” hazard severity zones. Downstream of the site, past the junction of Pacheco Creek and Pajaro River, many of the nearby communities are located within the wildland urban interface of the State Response Area (California Department of Forestry and Fire Protection 2007). A portion of the site is also located within the Local Response Area, and is not considered a high fire hazard severity zone. Wildlands in the Project area could catch fire if an errant spark or heat from construction equipment were to provide ignition. This impact is limited to the construction phase of the Project. During construction, SCVWD would adhere to all fire prevention and protection requirements and regulations of the Santa Clara County and Public Resources Code wildland fire safety measures, as applicable. Therefore, the impact is considered less than significant.

2.4.9 Hydrology

Table 2-10. Hydrology Checklist

IX. HYDROLOGY: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Violate any water quality standards or waste discharge requirements?	X		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (for example, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?		X	
c) Substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	X		
d) Substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?		X	
e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		X	
f) Otherwise substantially degrade water quality?	X		
g) Place housing within a 100-year flood-hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X
h) Place within a 100-year flood-hazard area structures which would impede or redirect flood flows?		X	
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?		X	
j) Inundation by seiche, tsunami, or mudflow?			X

Environmental Setting

Pacheco Reservoir is situated on Pacheco Creek, a tributary of the Pajaro River. Pacheco Creek drains approximately 165 square miles (above San Felipe Lake) in Santa Clara and San Benito Counties. The watershed topography is mountainous and steep in the upper portions. Water released from Pacheco Reservoir flows into the North Fork Pacheco Creek and joins the South Fork of Pacheco Creek just upstream from SR 152. Other main tributaries of the Pajaro River include Corralitos, Uvas, Llagas, and Santa Ana Creeks. Historically, flooding has occurred along both Pacheco Creek, including a levee failure along a lower section of the creek in 2017, and the Pajaro River.

The existing Pacheco Reservoir provides 6,150 acre feet of water storage capacity. The existing reservoir captures and stores seasonal runoff from within the 65 square mile watershed. The water stored in Pacheco Reservoir is released into Pacheco Creek, a perennial stream, to recharge the groundwater basin.

Operations at Pacheco Reservoir, under existing conditions, periodically caused the Reservoir to go dry. Historic records are limited, and it appears likely that different reservoir operation strategies were employed at different times. Pacheco Reservoir storage records available for the 29 years between 1975 to 2003, reflect that the Reservoir was drained in 17 of the 28 years, which is 60 percent of all years.

The proposed Project would inundate the majority of the existing reservoir. The new dam and reservoir would be constructed on Pacheco Creek 0.5 mile upstream from the existing North Fork Dam. The water storage capacity of Pacheco Reservoir will increase by 136.1 TAF, raising the storage capacity to 141.6 TAF.

Water quality is regulated under the federal CWA and the California Porter-Cologne Water Quality Control Act. Under these statutes, Beneficial Uses have been established and divided into 20 standards by the Central Coast Regional Water Quality Control Board (CCRWQCB). Beneficial Uses at Pacheco Reservoir include municipal and domestic supply, agricultural supply, groundwater recharge, water contact and non-contact water recreation, wildlife habitat, cold and warm freshwater habitat, fish spawning, preservation of rare and endangered species, freshwater replenishment, navigation and commercial and sport fishing (Central Coast Regional Water Quality Control Board 2016). Beneficial Uses designated for Pacheco Creek include municipal and domestic supply, agricultural supply, groundwater recharge, water contact and non-contact water recreation, wildlife habitat, cold and warm freshwater habitat, fish migration, fish spawning, preservation of biological habitats, preservation of rare and endangered species, freshwater replenishment, and commercial and sport fishing (Central Coast Regional Water Quality Control Board 2016). The Pacheco Reservoir releases are not known to contribute to the identified impairments to Beneficial Use. However, Beneficial Uses at Pacheco Creek are identified as impaired under CWA Section 303(d) due to high concentrations of fecal coliforms, low dissolved oxygen and turbidity sourced from agriculture, natural and grazing-related sources, as well as from storm drainage discharges, animal discharges, and sewer spills and leaks (Central Coast Regional Water Quality Control Board 2016, County of San Benito 2015, State Water Resources Control Board 2010).

The Sustainable Groundwater Management Act (SGMA) was passed in 2015. SGMA requires high and medium priority basins, as defined by DWR California Statement Elevation Monitoring Program, to form Groundwater Sustainability Agencies (GSA) and develop Groundwater Sustainability Plans in order to reduce or eliminate undesirable results from groundwater pumping. SCVWD intends to enter into agreements with each GSA that could be affected by the Project, consistent with Article 8 Interagency Agreements (Water Code §10727.6), or through voluntary coordination agreements.

Groundwater subbasins affected by the Project include:

- Llagas Area, Bolsa Area, Hollister Area, and the San Juan Bautista Area subbasins in the Gilroy-Hollister Basin
- Pajaro Valley Subbasin in the Corralitos Basin.

- Delta-Mendota Subbasin in the San Joaquin Valley Basin (via increased Central Valley Project Improvement Act Incremental Level 4 Refuge water supplies provided by the Project)

Explanations for IX. Hydrology

a, f) Potentially Significant Impact. Several Project construction-related activities have the potential to degrade water quality, in a manner that could exceed federal and/or state water quality standards and/or otherwise substantially degrade water quality. The Reservoir would naturally drain for one construction season and a cofferdam and a diversion channel would be constructed to maintain a dry construction area around the dam.

Pacheco Reservoir would drain and the discharged water would travel downstream to Pacheco Creek through existing outlets. The discharged water would be expected to contain elevated levels of suspended solids, high water temperatures, and low dissolved oxygen levels, especially as the water level in the reservoir declines. Consequently, sedimentation basins would be put in place to reduce turbidity levels and the impact of suspended sediments in the flow, prior to the water discharge into the downstream channels. Discharges of poor quality water from the Reservoir could adversely affect water quality conditions in Pacheco Creek, especially during the summer low flow period when temperature levels are already elevated. Adverse effects on water quality in Pacheco Creek during reservoir draining may extend downstream for several miles. However, Pacheco Reservoir is drained in approximately 60% of years under existing operations. Therefore, water quality impacts from dewatering of the Reservoir are not expected to change significantly beyond existing conditions.

Throughout Project construction, the excavation areas— including the dam embankments, borrow areas, and pipelines— would require dewatering of any nuisance inflows. These inflows, along with runoff from exposed soils in active work areas, are likely to contain high concentrations of particulates (high suspended solids/turbidity), and potentially, residual petroleum products from construction equipment. If discharged to Pacheco Creek directly, these pollutants would potentially exceed federal and state water quality standards or otherwise degrade beneficial uses. However, proper construction practices will be followed to control the impact of and the exposure time to potentially harmful pollutants.

Temporary staging areas are identified in various locations in the Project site. Some of the staging areas would be used to store and process large quantities of rock material for dam construction. These also would have the potential to generate contaminated runoff.

To address temporary impacts, SCVWD would incorporate soil stabilization, sediment control, tracking control, waste management and pollution control, and non-stormwater management BMPs into Project design. A SWPPP would also be required, providing an additional regulatory mechanism to ensure that adverse effects to water quality are minimized to the maximum extent practicable during construction. Potential water quality degradation from construction of the proposed Project will be evaluated further in the EIR. Measures to reduce the level of significance of this impact will also be identified.

After Project construction, the dam and reservoir would be operated in compliance with federal, state, and local regulations. Project operation would not contribute pollutants identified as impairing water quality in Pacheco Reservoir or Pacheco Creek. In addition, the operation of the new reservoir will provide for improved flows and temperatures in Pacheco Creek. Increased late-spring, summer, and fall flows and reduced water temperatures provided by the Project are anticipated to have beneficial effects on dissolved oxygen levels in Pacheco Creek. However, due to potential water quality and waste discharge issues from project construction, the impact is considered potentially significant. The EIR will further evaluate potential impacts to water quality that may result from construction of the Project

b) Less than Significant Impact. The Pacheco Reservoir Expansions Project has the potential to provide positive contributions in seven California groundwater subbasins, increasing water for recharge downstream of the reservoir in Pacheco Creek and the Pajaro River. In subbasins underlying SCVWD service areas, additional surface water supplies developed through the Project would reduce dependence on groundwater, increasing groundwater storage and groundwater levels. In In the Gilroy-Hollister Valley Basin, the Project would provide landowners near Pacheco Creek reliable supplies of high-quality groundwater in-lieu of delivered surface water, which could allow San Benito County Water District to re-prioritize surface water deliveries to areas dependent on groundwater. In the Pajaro Valley, the Project can provide for continued in-channel groundwater recharge in the reach of the Pajaro River between Chittenden and Murphy Crossing—a zone that experiences seawater intrusion, affecting groundwater quality for the City of Watsonville. The delivery of Incremental Level 4 refuge water supply to Grassland Resource Conservation District in below normal water years can, in part, reduce reliance on groundwater pumping in a region that has experienced significant land subsidence due to chronic overdraft.

Project construction activities may temporarily impact the recharge of groundwater basins downstream of Pacheco Reservoir. During the Project, the Reservoir would be dewatered, thus reducing the availability of water for recharge of groundwater basins downstream. This will only minimally change the seasonal flows in Pacheco Creek during construction. After the Project is complete, Pacheco Creek will experience yearlong flow, contributing to a net surplus of raising the groundwater table level. Operational discharges from Pacheco Reservoir to support groundwater recharge activities would resume and increase after the Project is constructed. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts to groundwater supplies that may result from construction of the Project

c) Potentially Significant Impact. Project construction would involve draining Pacheco Reservoir, discharges of water from construction work areas to Pacheco Creek, and substantial ground excavations at the dam and five borrow locations near the dam. These actions could alter the existing drainage patterns in the Project area, such that indirect erosion or siltation would occur.

During Project construction, water discharged to Pacheco Creek would occur through existing outlets from the dam, and temporary discharges from dewatered construction

areas. Measures would be implemented to reduce the potential impacts of construction-related discharges to Pacheco Creek.

Up to five borrow areas would be excavated to obtain materials for dam construction (See Exhibit 11). The majority of these areas will be inundated by the expansion of the reservoir. Excavation of the borrow areas may locally alter drainage runoff patterns, but would not increase the timing or amount of runoff to nearby waters. Moreover, most the borrow areas would be inundated by the expanded reservoir. Construction of the access road could lead to loose sediment and small scale erosion. See Section 1.5.2 Site Preparation and Section 2.4.11 Mineral Resources for information about the construction and composition of the borrow areas and access road.

The new embankment dam would be constructed on Pacheco Creek, 0.5 mile upstream from the existing North Fork Dam. The existing dam would be removed and the historical Pacheco Creek channel would be restored between the new dam and the existing dam through the existing Pacheco Reservoir. The channel will be designed to reduce streambank erosion (e.g., using bank stabilizing materials), and riparian vegetation will be planted to initiate growth of a new riparian forest along the restored channel. Excavation and related construction activities for the channel restoration may temporally increase erosion and siltation. However, measures would be implemented to reduce the potential impacts of these construction-related activities.

Following construction, operation of the Project would increase the potential for shoreline erosion due to the expanded reservoir. During large flood events, the expanded reservoir will reduce peak flows in Pacheco Creek. Reduced flood flows may reduce erosion downstream of the new dam along Pacheco Creek.

The impacts described above include several potentially significant issues, and will be evaluated further in the EIR. The EIR will further evaluate potential impacts to existing drainage patterns that may result from construction of the Project.

d) Less than Significant Impact. Project operation has the potential to substantially alter the existing drainage patterns downstream of the new dam in Pacheco Creek and Pajaro River by significantly decreasing the volume of water discharged from Pacheco Reservoir during flood events. The Project has the potential to reduce flood flows and the extent of the 100-year floodplain. Therefore, the impact is less than significant. The EIR will further evaluate potential impacts to existing drainage patterns that may result from construction of the Project

e) Less than Significant Impact. There are currently no existing or planned stormwater drainage systems in the project area. Under existing conditions, naturally occurring runoff is captured in Pacheco Reservoir and then released downstream in Pacheco Creek. Under operations of the Project, larger volumes of naturally occurring runoff would be captured in the expanded reservoir in comparison to the existing conditions.

No new sources of polluted runoff would be created by the proposed Project. As described above, several Project construction-related activities have the potential to degrade water quality and create additional sources of polluted runoff. A SWPPP would

be prepared for the construction sites, to ensure adverse effects to water quality are minimized to the maximum extent practicable during construction. Potential water quality degradation from construction of the proposed Project will be evaluated further in the EIR. Measures to reduce the level of significance of this impact will also be identified.

As the Project would reduce the risk of flooding downstream of the new dam and would not provide substantial additional sources of polluted runoff, the impact is considered less than significant. The EIR will further evaluate potential impacts to existing stormwater systems that may result from construction of the Project

g) No Impact. The proposed Project would not involve placement of housing within a 100-year flood-hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map. Therefore, there is no impact and the EIR will not evaluate the impacts related to placing housing within a 100-year flood area.

h) Less than Significant Impact. The North Fork Dam currently impounds flows within Pacheco Reservoir and protects downstream areas from flood impacts. The new dam and associated infrastructure will continue to provide these functions. The expanded size of the reservoir relative to existing conditions would increase the system's ability to capture and manage flood flows to prevent damage. The proposed Project has the potential to reduce the extent of the damages from a 100-year flood by reducing flood flows downstream of the reservoir. Therefore, the impacts are considered less than significant. The EIR will further evaluate the potential for Project construction and operation to place structures within a 100-year flood-hazard areas.

i) Less Than Significant Impact. There is limited development downstream of the proposed dam. However, the Project has the chance of exposing people to the risk of loss, injury, or death involving flooding due to the proximity of SR 152 to Pacheco Creek. If the dam were to fail, the increased flow into Pacheco Creek could cause damage on SR 152 and downstream along Pacheco Creek and Pajaro River. The new dam, including the spillway, would be designed to meet DSOD standards.

North Fork Dam currently impounds flows within the existing reservoir and protects downstream areas from flood impacts. The expanded size of the reservoir relative to existing conditions would increase the system's ability to capture and manage flood flows to prevent damage. The proposed Project has the potential to reduce downstream flood stages, thereby potentially reducing the risk of levee failure.

The impacts are considered to be less than significant. The EIR will further evaluate potential impacts of exposing people or structures to a significant risk of loss, injury or death involving flooding that may result from construction of the Project.

j) No Impact. It is unlikely the Project operation activities may result in a seiche, due to the relatively small capacity of the expanded reservoir. It is also not anticipated that Project construction or operation would result in a mudflow. The Project site is located too far inland to be influenced by a tsunami event. Thus, the Project would have no impact on exposing people or structures to loss, injury or death involving inundation by seiche,

tsunami or mudflow. Therefore, there is no impact and the EIR will not evaluate the impacts potential inundations by seiche, tsunami, or mudflow.

2.4.10 Land Use Planning

Table 2-11. Land Use Planning Checklist

X. LAND USE AND PLANNING: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Physically divide an established community?			X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	X		
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?		X	

Environmental Setting

The Project site is within the sphere of influence of unincorporated Santa Clara County. The lands surrounding Pacheco Reservoir are rural and primarily used for grazing. Two single-family residences are located one mile south of the existing North Fork Dam. Several small ranching facilities located along the North Fork of Pacheco Creek— collectively referred to as O'Connor Ranch— would be inundated by the expanded reservoir.

Explanations for X. Land Use Planning

a) No Impact. There are no established communities in close vicinity to the Project site. Therefore, the Project would not involve activities or construction of features that would divide an established community and there is no impact. The EIR will not evaluate the impacts related to physically dividing an established community.

b) Potentially Significant Impact. Project construction activities would primarily occur on land owned by PPWD. In addition, temporary and permanent rights-of-way and acquisitions of private property would be needed for Project implementation. Existing land uses on PPWD properties would not conflict with existing or future designated uses of the properties. Because the disruption in land uses would be temporary, this is not considered a potentially significant impact.

Conflicts with existing use of private parcels, such as by preventing activities or occupation of structures from continuing, removal, or relocation of the structures— or preventing the designated use of the site from occurring in the future— may result in a potentially significant impact. The EIR will further evaluate this topic, using additional information regarding the existing uses of properties and the Project's proposed temporary and permanent alterations to the site. The EIR will further evaluate potential impacts to local land use plans or policies that may result from construction of the Project.

c) Less than Significant Impact. See Section 2.4.4 Biological Resources for more information.

2.4.11 Mineral Resources

Table 2-12. Mineral Resources Checklist

XI. MINERAL RESOURCES: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			X

Environmental Setting

Many mineral resource deposits in Santa Clara County are of regional or state-wide significance, as determined by state agencies (County of Santa Clara 1994). Mineral resources of regional or statewide significance, found and extracted in Santa Clara County, include construction aggregate (crushed stone, sands, and gravels), deposits of limestone, and, to a lesser extent, salts derived from evaporation ponds at the edge of San Francisco Bay. While some sand and gravel resources have been identified within Pacheco Creek downstream of the Project area (California Division of Mines and Geology 1999), none have been identified within the Project area. The materials to be quarried from the Project areas are not commonly economically desirable for mining.

The California Geological Survey Guidelines for Classification and Designation of Mineral Lands (California State Mining and Geology Board 2000) contains guidelines for classification and designation of mineral lands for determining suitability as Aggregate Resources Areas. The guidelines include specific land uses that are considered to be generally incompatible with mining and have been excluded as ARAs. The Economic Exclusion category includes major public or private engineering projects, including dams, and therefore would exclude the Project area as one containing minerals of state or local importance. Therefore, even if the Project site contained minerals of state-wide or local importance, the Project would be exempt from complying with state guidelines.

Explanations for XI. Mineral Resources

a, b) No Impact. Five on-site borrow areas have been identified as sources for the materials necessary to construct the Pacheco Dam embankment, spillway, cofferdam and other Project facilities (Wahler 1993). The five borrow areas are situated primarily in areas that will be partially inundated by the proposed Project. Preparation of the borrow areas include the reservoir borrow areas, the spillway area and the existing dam site prior to its removal. Preparation would include grubbing, stripping and disposal of topsoil, and implementation of any associated work access or material processing areas. Exhibit 11 shows borrow acreages for the proposed Project.

The areas for impervious borrow materials would be along the Pacheco Creek. The material in this area was classified as a low plasticity silt or clay (Wahler 1993). The potential random fill borrow area consists of a mix of silt, sand, gravel and boulders. The proposed rock borrow area was determined through field observation to be primarily cemented greywacke sandstone.

Based on the Economic Exclusion category presented in the California Geological Survey Guidelines for Classification and Designation of Mineral Lands, the material from these borrow areas are not considered minerals of state-wide importance and would not affect future mining of mineral resources. Excavated materials would be directly used for dam reconstruction and would not be sold or distributed to other parties.

It is not expected that borrow materials of sufficient quality to be used as drain/filter rock will be found within the Project boundaries; therefore, these materials will likely need to be imported from an outside, commercial resource.

Project activities would primarily rely upon mineral resources found on site. No important mineral resources are present within the Project footprint that would become unavailable as a result of the Project. With the exception of good quality rock needed for drain/filter materials, the Project would not use a substantial amount of mineral resources from offsite, or involve other activities that would adversely affect future mining in the County. There would be no impact on mineral resources of local or state-wide importance. The EIR will not evaluate the impacts related to the loss of availability or a known or locally-important mineral resource.

2.4.12 Noise

Table 2-13. Noise Checklist

XII. NOISE: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	X		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	X		
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing levels without the project?	X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?			X

Environmental Setting

Noise standards are typically established at the state and local level. The Santa Clara County Noise Ordinance would apply to construction and operational noise affecting homes near Pacheco Reservoir. The ordinance sets specific daytime and nighttime noise limits at residential areas for both construction and operational phases. However, it does not apply to nonresidential recreational areas and vehicles traveling on public roads. There are no substantial noise sources within the Project area, and the existing noise environment is dominated by natural sounds and traffic on SR 152.

Explanations for XII. Noise

a, b) Potentially Significant Impact. The proposed Project involves construction of a new dam, new pump station and new pipeline and related conveyance improvements, and access roads. Construction activities may require double shifts (two 10-hour shifts per day) up to six days per week to meet the construction schedule. Construction activities include removal of the existing North Fork Dam, and construction of a temporary cofferdam, new embankment, and new spillway. Construction methods for dam removal and the cofferdam would consist of clearing, grubbing, stripping of disposal of topsoil; and grading, consisting of excavation of soil and rock, filling, and compacting. Construction methods for the new embankment and spillway include excavation and processing of borrow materials; hauling, placing and compacting fill and backfill, and

forming and placing concrete. In addition, construction of the outlet pipe between the inlet structure and the pump station area may involve very limited blasting.

Each phase of Project construction would generate noise and groundbourne vibration from the operation of heavy equipment and supporting stationary equipment— such as generators, materials, and screening equipment— as well as noise from blasting which is anticipated to occur one or two times per week.

The impacts of the noise and vibrations would be primarily limited to the two residential facilities located south of the North Fork Dam and O'Connor Ranch. The homes south of the dam are located several miles from the nearest construction zone, and would be partially shielded from construction noise by rugged terrain. It is anticipated that these properties, along with O'Connor Ranch, would be acquired prior to construction activities commencing. However, if the properties are not acquired, construction activities on Pacheco Reservoir would expose persons to noise levels in excess of local standards established by Santa Clara County, and to excessive groundbourne vibration. In addition, blasting activities could be audible from portions of Henry W. Coe State Park, particularly along the ridgelines overlooking Pacheco Reservoir.

It is not anticipated that there would be long-term noise impacts from Project operation. However, due to the temporary impacts on noise from construction activities, the impact is considered potentially significant. This issue will be evaluated further in the EIR, based on the results of the noise and vibration analysis described above and applicable noise standards. The EIR will further evaluate potential impacts from excessive noise or groundborne vibration that may result from construction of the Project.

c) Less than Significant. Project construction activities will temporarily create an increase in ambient noise levels. Operation of the proposed Project would involve occasional maintenance activities, functional use of the spillway and intake and outlet structures, and possible operation of pumps and other equipment. Noise associated with these activities is currently occurring, and it is not expected that there would be any increase in noise levels over existing conditions. Operation of the new Pacheco Reservoir Pump Station will create a permanent increase in ambient noise levels at the Project site. However, the new pump station will be enclosed in a structure designed to reduce noise levels. The noise from the pump station would be primarily limited to the two residential facilities located south of the North Fork Dam and O'Connor Ranch. These structures would be partially shielded by rugged terrain; furthermore, is anticipated that these properties would be acquired by SCVWD prior to Project operation commencing. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts to permanent ambient noise levels that may result from construction and operation of the Project.

d) Potentially Significant Impact. During construction, there would be a temporary noise increase from the use of heavy equipment and blasting. Blasting would occur infrequently, and would only take place during daytime hours. Because the area around the proposed dam site is largely rural and open space, blasting noise is not expected to result in adverse effects on human health. However, the noise would be loud enough to briefly disturb daytime activities at the nearest homes. Blast noise could be audible in

portions of Henry W. Coe State Park, particularly the ridgeline overlooking the Pacheco Reservoir. SCVWD would require the contractor to comply with all applicable noise and occupational safety standards, as defined in the construction specifications, and to protect workers and other persons from the health effects of increased noise levels from the use of construction equipment. Nonetheless, the impact is considered potentially significant. The EIR will further evaluate potential impacts to ambient noise levels that may result from construction of the Project

e) No Impact. The Project is not located within an airport land use plan, and there are no public airports or public-use airports within two miles of the Project. The nearest public or public-use airport is the San Martin Airport, approximately 27 miles northeast of the Project area. Therefore, there would be no impact and the EIR will not evaluate the impacts related to airport land us plans.

f) No Impact. There are no known private airstrips within two miles of the Project area. Therefore, there would be no impact and the EIR will not evaluate the impacts related to private airstrips.

2.4.13 Population and Housing

Table 2-14. Population and Housing Checklist

XIII. POPULATION AND HOUSING: Would the project:	**Potentially Significant Issues**	**Less Than Significant Impact**	**No Impact**
a) Induce substantial growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?		X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?			X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?			X

Environmental Setting

The proposed Project site is within the sphere of influence of unincorporated Santa Clara County. Pacheco Reservoir is located about 23 miles northeast of Gilroy and 2 miles north of State Route 152, as shown in Figure 1-1. The Project site is on land owned by PPWD and private parties. The area surrounding the proposed Project is rural and open space, primarily used for grazing. There are two residential properties located on Santa Clara County APN 898-49-001, one mile south of the North Fork Dam. There are also several structures identified as O'Connor Ranch (Santa Clara County APN 865-11-020) located along Pacheco Creek, approximately six miles up the canyon from the existing reservoir. O'Connor Ranch would be inundated by the expanded reservoir. It is anticipated that SCVWD would acquire these properties prior to Project construction commencing. There are also a number of associated support facilities below the existing dam and spillway.

Explanations for XIII. Population and Housing

a) Less than Significant. The proposed Project includes construction activities necessary to remove the North Fork Dam and to construct the new Pacheco Dam. Construction workers would be temporarily employed at the Project site, and these jobs would generally be anticipated to be filled by the local work force. No new long-term employment opportunities, or substantial population growth, would result from construction activities.

Changes in operation of Pacheco Reservoir would not result in an increase in employment opportunities that could lead to population growth. The Project increases the capacity of the existing reservoir, providing a more reliable water supply for SCVWD and other San Felipe Division contractors. The Project's potential for increased population growth will be evaluated in the EIR. The impact is considered less than significant. The EIR will further evaluate potential impacts to population and other substantial growth that may result from construction of the Project

b, c) No Impact. There would not be substantial numbers of existing housing or people displaced by construction or operation of the proposed Project. Therefore, there is no impact and the EIR will not evaluate the impacts related to displacing substantial numbers of existing housing or people.

2.4.14 Public Services

Table 2-15. Public Services Checklist

XIV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Fire protection?		X	
b) Police protection?		X	
c) Schools?			X
d) Parks?			X
e) Other public facilities?			X

Environmental Setting

The Project site is located within the unincorporated area of Santa Clara County. Fire protection in the area is provided by the CalFire Pacheco Station, located about five miles west of the Reservoir on SR 152. The Santa Clara County Sheriff's Office and California Highway Patrol would respond to the area in the event of safety or security situations.

The Pacheco Reservoir facilities are owned and operated by PPWD. The land surrounding the Reservoir is privately held, with the exception of Henry W. Coe State Park. Henry W. Coe State Park is the largest state park in Northern California at 87,000 acres. Several miles of Pacheco Creek run through the state park. In May of 2003, the SCVWD Board made a decision that the

expansion of Pacheco Reservoir would not adversely impact Henry W. Coe State Park. Therefore, no parks or governmental or public facilities will be physically altered, constructed, expanded or otherwise affected by the proposed Project.

Explanations for XIV. Public Services

a, b) Less than Significant Impact. The movement of heavy and slow-moving construction equipment to the Project site may temporarily increase traffic along SR 152. In addition, there may be increased traffic along SR 152 from workers driving to the Project site. The increased traffic may impede or cause a reduction in the response time of fire, police, and other emergency response vehicle moving along SR 152. However, the impact is considered less than significant. The EIR will further evaluate potential impacts to fire and police protection response times that may result from construction of the Project

c) No Impact. The nearest school is Pacific Point Christian School, which is located approximately 19 miles southwest of the Project area at 2220 Pacheco Pass Highway in Gilroy. The Project would not impact existing school facilities nor would it contribute to any change in population or other land-use modifications that would impact the local school district. Therefore, there are no impacts associated with the need to expand any school facilities and the EIR will not evaluate the physical impacts related to schools.

d) No Impact. The Henry W. Coe State Park boundary is located 2,100 feet from the Reservoir; however, no part of the park will be inundated by the proposed Project. Pacheco State Park is located about 4.7 miles east of the Project area and will be unaffected by the proposed Project. Therefore, there will be no impacts associated with physical alteration or environmental degradation of parks and the EIR will not evaluate the physical impacts related to parks.

e) No Impact. There are no other public facilities in the proposed Project area. Therefore, there is no impact and the EIR will not evaluate the physical impacts related to public facilities, other than those listed in sections above.

2.4.15 Recreation

Table 2-16. Recreation Checklist

XV. RECREATION: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X

Environmental Setting

At 87,000 acres, Henry W. Coe State Park is the largest state park in Northern California. The state park's northern entrance is located about an hour southeast of the City of San Jose. The southern (Hunting Hollow) entrance is located just east of the City of Gilroy. Recreational uses in the park include: hiking, backpacking, camping, mountain biking, fishing and horseback riding. The state park is open year-round for hikers, mountain bikers, backpackers, equestrians, campers and picnickers. The Henry W. Coe State Park boundary is located 2,100 feet from the reservoir. No part of the park will be physically alternated or affected by the proposed Project.

The areas around Pacheco Reservoir are designated by the Santa Clara County General Plan as ranchlands (County of Santa Clara 1994). The South County Joint Area Plan states that the open spaces in South Santa Clara County should be preserved, maintained and considered for location of future regional parks. Moreover, the visual integrity of scenic gateways to the Pacheco Pass should be protected. However, land in the area of Pacheco Reservoir are primarily privately held and devoted to open space and ranchlands. Pacheco Reservoir itself does not support any recreational activities. Therefore, construction of the expanded Pacheco Reservoir would not impact any recreational uses in the Project area.

Explanations for XV. Recreation

a) No impact. All proposed activities for the Project are outside of Henry W. Coe State Park. No views of the reservoir exist from any scenic overlooks, trails or roads within the park. The new dam and spillway would not be visible from trails or roads within the park, due to natural topography of the area. Small portions of the reservoir may be visible from locations on Kaiser-Aetna Road, which leads to the Dowdy Ranch Area and Visitor Center. However, it is not anticipated that the Project would increase the use of Henry W. Coe Sate Park or other regional recreational facilities.

Further analyses and studies may be conducted to determine whether it is feasible to provide recreational benefits at Pacheco Reservoir. However, at this time, there are no existing or planned recreational facilities in or around Pacheco Reservoir. If recreational facilities are incorporated into the Project, the EIR will evaluate the impacts related to increasing the use of regional parks or other recreational facilities.

b) No impact. The proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities. Further analyses and studies may be conducted to determine whether it is feasible to provide recreational benefits at Pacheco Reservoir. However, at this time, there are no existing or planned recreational facilities in or around Pacheco Reservoir. If recreational facilities are incorporated into the Project, the EIR will evaluate the impacts related to the construction of expansion of recreational facilities.

2.4.16 Transportation and Traffic

Table 2-17. Transportation and Traffic Checklist

XVI. TRANSPORTATION/TRAFFIC: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**

a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	X		
b)	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	X		
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?			X
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		X	
e)	Result in inadequate emergency access?		X	
f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	X		

Environmental Setting

The Project area is within the unincorporated area of Santa Clara County, and would be subject to adopted policies and plans related to transportation and traffic. Level of service (LOS) is a way of measuring how well a road is operating, based on average control delay per vehicle, and in some analyses based on the ratio of the volume of traffic to the capacity of the road. LOS A is a free-flowing condition and LOS F is extreme congestion, with traffic volumes at or over capacity. The transportation element of the Santa Clara County General Plan (County of Santa Clara 1994) states that projects that will severely impact the transportation system should be required to mitigate the impacts, using transportation demand management and other transportation control measures. Transportation system management measures should be employed to ensure maximum operating efficiency of the existing system of roads and highways, including, but not limited to, the following: signal synchronization, signal pre-emptions for transit vehicles, ramp metering, traffic surveillance, and traffic advisory signs.

Roadways of particular relevance for the Project include: those that would be used during Project construction, those used as transportation routes to and from the Project site, and those that would be directly modified as part of the Project. In addition, it is anticipated that site access would include constructing new haul and access roads in conjunction with making improvement to existing roadways.

Vehicle use resulting from the Project would primarily occur on SR 152, also known as the Pacheco Pass Highway. SR 152 is a heavily traversed highway approximately 115 miles in length that links the San Joaquin Valley with the southern San Francisco Bay Area. SR 152 runs east and west from the City of Watsonville to Route 99 southeast of the City of Merced, going through the counties of Santa Cruz, San Benito, Santa Clara, Merced and Madera. The Transportation Element of the Santa Clara County General Plan (County of Santa Clara 1994) describes SR 152 as a busy highway and one of the scenic gateways in Santa Clara County.

The section of SR 152 from the Merced and Santa Clara County border to I-5 is designated as a scenic highway route.

SR 152 is built to rural standards, with direct at-grade access to the highway allowed for cross roads at various locations. Given the high-volumes and high speeds of vehicles that travel on this facility, at-grade crossings present a safety hazard. During the periods of peak usage, gaps in traffic adequate for a vehicle to turn to the highway and accelerate up to speed are limited.

Vehicles would access Pacheco Reservoir via the existing access road adjacent to SR 152. The existing access road would be improved and expanded as part of the proposed Project. In addition, a permanent haul road and access road and temporary access road would be constructed.

Explanations for XVI. Transportation and Traffic

a, b) Potentially Significant Impact. The proposed Project would not conflict with or prevent implementation of adopted plans, policies, or programs related to performance of circulation systems or programs supporting alternative transportation.

Construction activities would result in an increase in traffic in the Project area, which could exceed the capacity of some segments in the road network. Initial mobilization of the proposed Project, and import of materials from off-site locations, would result in heavy vehicles and equipment accessing the Project site via the existing and new access roads. Construction personnel, equipment, and materials would travel to the site via SR 152 and access roads. The proposed Project would result in increased traffic on SR 152, and could further degrade operation at roadway locations already operating at unacceptable LOS. However, the effect would be temporary. The issue is potentially significant. The EIR will further evaluate the effects to traffic.

Site access would also include constructing new haul and access roads in conjunction with making improvements to existing roadways. Details regarding access improvements would need to be coordinated with Caltrans.

Limited staging activities for construction of the pipeline would be established adjacent to the two single-family residential properties south of the reservoir Project area. All construction contractor parking would be located within the Project site.

The proposed Project would inundate a large section of an unnamed, unpaved road currently being used to access O'Connor Ranch, located upstream along Pacheco Creek. This road currently extends from SR 152 and runs north, adjacent to North Fork Pacheco Creek. Inundating this road will severely limit or completely eliminate access to some properties along the North Fork of the Creek. The effects of inundating this road will be evaluated further in the EIR.

Traffic patterns on and access to SR 152 would return to existing conditions upon Project completion. However, the transportation effects during Project construction (lasting approximately six years) would constitute a potentially significant issue that will be evaluated further in the EIR.

c) No Impact. The Project would not affect existing air-traffic patterns during construction. There would be no change in air-traffic patterns or air-safety risks. Therefore, there is not impact and the EIR will not evaluate the impacts related to air-traffic patterns.

d) Less than Significant Impact. A 6-mile haul road and 1.7-mile permanent access road would be constructed for the Project. In addition, the existing access road would be improved, and a temporary .8-mile access road would be constructed. The reconstructed and new portions of the access road would provide at least the same traffic capacity as the existing section, and would likely result in a safer curve with improved lines of sight compared to existing conditions. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts from increased hazards due to design features that may result from construction of the Project

e) Less than Significant Impact. Initial mobilization of the proposed Project, and import of Project materials from off-site locations, would result in heavy vehicles and equipment accessing the Project site via SR 152 and the existing access road. In addition, there may be increased traffic along SR 152 from workers driving to the Project site. The increased traffic may impede or cause a reduction in the response time of fire, police and other emergency response vehicles moving along SR 152.

In addition, the presence of large, slow-moving equipment driving past the two residential properties south of the reservoir may result in temporary safety hazards. It is unlikely that this scenario will interfere in the implementation of county emergency response or emergency evacuation plans. However, impacts to traffic will be temporary, and Project operation are not anticipated to increase traffic on SR 152 or the surrounding area. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts to emergency access that may result from construction of the Project

f) Potentially Significant Impact. Although bicycles are allowed along SR 152, the highway is not commonly used as a route for bicycling or pedestrian traffic. Santa Clara County is currently in the process of updating its Countywide Bicycle Plan. The 2000 Countywide Bicycle Plan identified 16 Cross-County Bicycle Corridors, including the *Hwy 152 Corridor* extending from the Santa Cruz County line to the Merced County line as a vehicle corridor (Santa Clara Valley Transportation Authority 2008). However, there are no existing or proposed bicycle trails or infrastructure along SR 152. The Santa Clara Valley Transit Authority has produced a bikeway map that rates bike paths and roadways within the region for bicycle travel. The bikeway map assigned SR 152 (east of Gilroy) a rating of “Extreme Caution.” The Merced County Regional Bicycle Transportation Plan identifies two proposed regional bikeway projects along SR 152 (Merced County Association of Governments 2008). The Project’s impact to these proposed bikeway projects would be further evaluated in the EIR.

Public Transit in the Project area is provided by Merced County and Santa Clara Valley Transit Authority. Several local and regional bus routes travel on SR 152 in the cities of Gilroy and Los Banos. Heavy and slow-moving construction equipment on SR 152 could decrease the performance and safety of these buses. Therefore, the impact is

considered potentially significant. The EIR will further evaluate potential impacts to public transit that may result from construction of the Project

2.4.17 Tribal Cultural Resources

Table 2-18. Tribal Cultural Resources Checklist

XVII. TRIBAL CULTURAL RESOURCES: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	X		
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	X		

Environmental Setting

The Project is located in the southeast portion of Santa Clara Valley along Pacheco Creek. Archaeological evidence for the South Santa Clara Valley suggests that it has been inhabited for at least 4,200 years. Until about 2,500 years ago, populations were non-permanent, and seasonally moved out of the South Santa Clara Valley to take advantage of resources in coastal and inland California. Pacheco Pass was used a passage to the coast, primarily by the Costanoan Indians, of Ohlone.

The Ohlones extended from coastal San Francisco, south past Carmel and about 60 miles inland. At least two separate groups, the Ausaimas and the Uñijaimas, held the valley portions of the Pajaro River, where Pacheco Creek is a tributary. The Ausaimas occupied the Bolsa—including the San Felipe Lake area— Tequisquita Slough, and lower Pacheco Creek. The Uñijaimas lived along the western edge of south Santa Clara Valley, and the foothills north, from the Pajaro River up toward modern Gilroy. In the Bolsa/Pacheco Creek area was a large Ausaima village, Poitoquix, located in the general vicinity of Dunneville (possibly on the south bank of Pacheco Creek or north bank of Tequisquita Slough (Santa Clara Valley Water District 2008). The immediate vicinity of Pacheco Pass and Los Banos Creek was occupied by Kawatchwa Yokuts.

Assembly Bill 52, approved in September 2014, and effective July 2015, establishes a formal consultation process for California Native American Tribes to identify potential significant impacts to Tribal Cultural Resources, as defined by Public Resources Code Section 21074, as

part of CEQA. AB 52 applies to projects that file for a Notice of Preparation or Notice of Negative Declaration/Mitigated Negative Declaration on or after July 1, 2015. Lead agencies must provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if the tribe has submitted written request to be notified. The tribe must respond to the lead agency within 30 days of the receipt of notification if it wishes to engage in consultation on the project. The lead agency must begin the consultation process within 30 days of receiving the request for consultation.

The California Native American Heritage Commission has provided a consultation list of tribes with traditional lands or cultural places located within the boundaries of the Project area (Exhibit 13). In compliance with AB 52, SCVWD will notify all applicable tribes, and SCVWD will participate in any requested consultation.

Explanations for XVII. Tribal Cultural Resources

a.i) Potentially Significant Impact. There is the potential that tribal cultural resources listed in the California Register of Historic Places or a local register of historical resources could be located in the Project area. The exact age and potential significance of structures in the Project area is unknown. Project construction activities and the inundation of an expanded Pacheco Reservoir could damage or destroy any such resources. SCVWD will conduct further surveys as part of the EIR to determine the eligibility of the structures in the Project area as historic tribal resources. The impact is considered potentially significant. The EIR will further evaluate potential impacts to tribal historical resources that may result from construction of the Project.

a.ii) Potentially Significant Impact. Project construction activities would be limited to the area around Pacheco Reservoir, up to SR 152. Construction activities will include: grading; material excavation; clearing, grubbing, stripping and disposing of topsoil; blasting of hard fractured rock; and other activities that would disturb the soil in the Project area. Project construction would require excavation to previously undisturbed depths. The Environmental Setting section above describes the historical presence of tribes in the Pacheco Pass area. The potential exists for the Project to impact significant Tribal Cultural Resources, as defined by Public Resources Code Section 5024.1. Therefore, the impact is considered potentially significant. Further surveys and analysis of the topic will be provided in the EIR. The EIR will further evaluate potential impacts to significant tribal resources that may result from construction of the Project

2.4.18 Utilities and Service Systems

Table 2-19. Utilities and Service Systems Checklist

XVIII. UTILITES AND SERVICE SYSTEMS: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X

XVIII. UTILITES AND SERVICE SYSTEMS: Would the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?		X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	X		
g) Comply with federal, state, and local statutes and regulations related to solid waste?		X	

Environmental Setting

SCVWD manages an integrated water resources system that includes the supply of clean, safe water, flood protection and stewardship of streams on behalf of Santa Clara County's 1.8 million residents (County of Santa Clara 2013, Santa Clara Valley Water District 2017). SCVWD manages 10 dams and surface water reservoirs, three water treatment plants, and more than 275 miles of streams (Santa Clara Valley Water District 2017).

The North Fork Dam, which creates Pacheco Reservoir, was completed in 1939, and retains approximately 5.5 TAF of water. The North Fork Dam and existing Reservoir are owned and operated by PPWD. Water stored in Pacheco Reservoir comes from Pacheco Creek.

No established facilities exist at Pacheco Reservoir that require wastewater service. Residents in the area of the Reservoir rely on septic systems for wastewater needs. There is also no established stormwater infrastructure at the Reservoir. Stormwater runoff around the dam and Reservoir facilities absorbs into the ground, and it is not collected by any established drains or collectors.

The South Valley Recology facility in Gilroy has the capacity to accept Class A debris (such as construction debris). Some debris may also be brought to the John Smith Landfill in Hollister. There is currently no pick-up service for residents in the Pacheco Reservoir area.

Gas and electricity service in the Project area is provided by PG&E, who provides natural gas and electricity to approximately 13 million people through a 70,000 square-mile service area in Northern and Central California. One 70 kV PG&E transmission line, originating from a substation in Los Banos, exists in the vicinity of the proposed pump station site. The

transmission line would need to be upgraded to support the additional load required by the new pump station.

Non-SCVWD-owned utilities, above or below ground, may be present within the Project site and would have to be relocated; a detailed survey for locations of existing utilities would be completed prior to construction.

Explanations for XVIII. Utilities and Service Systems

a, c, e) No Impact. During Project construction, portable toilets would be provided at the construction site, and wastewater generated from construction employees would be disposed of at the South County Regional Wastewater Authority wastewater treatment plant. The Project would comply with all state, RWCQB, and local requirements related to the disposal of sewage, and daily wastewater generated at the construction site would not exceed wastewater treatment requirements. Additionally, the Project would not result in the generation of additional wastewater requiring treatment and disposal. No new or expanded waste water facilities would result from the proposed Project.

The Project has no impacts associated with wastewater treatment requirements, no impact on new wastewater facilities, no impact on water entitlements, and no impact on wastewater treatment demands. The EIR will not evaluate impacts related to wastewater treatment or new storm water drainage facilities.

b) Less than Significant Impact. Project construction will not result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. However, operation of the expanded Pacheco Reservoir would increase water supply reliability in drier water years. This is not anticipated to result in the construction of new water or wastewater treatment facilities. However, it could potentially increase the use of water treatment and wastewater treatment facilities during drier years, when there may be underutilized capacity under existing conditions. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts to new water or wastewater facilities that may result from construction of the Project

d) Less than Significant Impact. The proposed total storage for the new reservoir is 141.6 TAF, with an active storage of 140.8 TAF, giving an increase of 134 TAF of active storage. Currently, water captured in Pacheco Reservoir is from natural runoff from the local watershed. The Project would be filled using a combination of 1) natural hydrology within the North Fork Pacheco Creek basin, including the East Fork, and 2) by SCVWD-owned water from San Luis Reservoir under a CVP contract.

Project construction would not require new or expanded entitlements. Operation of the expanded reservoir will require a combination application/petition from the State Board for the proposed new structures, and a new water right and change in use. The change in use for Pacheco Reservoir will include adding fish preservation and enhancement. Therefore, the impact is considered less than significant. The EIR will further evaluate potential impacts from new water entitlements that may result from construction of the Project.

f) Potentially Significant Impact. Construction of the Project would produce solid waste associated with the various construction activities. Excavation at the embankments would result in waste rockfill that would require permanent disposal. Overburden material may also be used for haul road development and for the dam crest raise. Spoils disposed in these locations would remain permanently. As necessary, these sites would be treated with erosion controls and vegetated upon Project completion.

Waste generated from site demolition and modifications could include concrete rubble, asphalt, building components from the demolition of inlet/outlet facilities, and portions of the spillway. The majority of waste generated from site demolition and modifications would be recycled at a concrete or asphalt batching facility. Additional solid waste generated from construction and contractor activities that cannot be recycled would be transported to a permitted solid waste facility. The generated waste is likely to be relatively small, but has not been quantified, nor has a solid waste facility been identified at this time. Therefore, the potential exists that waste generated by the Project could cause the solid waste facility to exceed the maximum daily disposal limits and the impact is considered potentially significant. Project operation would not generate new solid waste. Impacts on solid waste disposal during construction could be significant, and will therefore be evaluated further in the EIR. The EIR will further evaluate potential impacts to local landfills and federal, state and local statues and regulations related to solid waste that may result from construction of the Project.

g) Less than Significant Impact. As described above, construction of the Project would produce solid waste associated with the various construction activities. A majority of the waste generated from site demolition and modifications would be recycled at a concrete asphalt batching facility. Additional solid waste generated from construction and contractor activities that cannot be recycled would be transported to a permitted solid waste facility. The generated waste is likely to be relatively small, but has not been quantified, nor has a solid waste facility been identified at this time. The SCVWD will comply with all applicable federal, state and local laws and regulations related to solid waste. Therefore, the impact is considered less than significant.

2.4.19 Mandatory Findings of Significance

Table 2-20. Mandatory Findings of Significance Checklist

XIX. MANDATORY FINDINGS OF SIGNIFICANCE: Does the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X		

XIX. MANDATORY FINDINGS OF SIGNIFICANCE: Does the project:	**Potentially Significant Impact**	**Less Than Significant Impact**	**No Impact**
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.)	X		
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X		

Explanations

a) Potentially Significant Impact. Construction activities of the proposed Project could potentially have significant impacts on air quality, agricultural and forestry resources, biological resources— including special-status plant and animal species, cultural resources, geology/soils, greenhouse gas emissions, hazards and hazardous materials, hydrology/water quality, land use/planning, noise, transportation/traffic, tribal cultural resources, and utilities.

Proposed Project operation could potentially have significant impacts on biological resources and hydrology/water quality.

These issues have the potential to degrade the quality of the environment for fish species, wildlife species and plant communities. Therefore, the impact is considered potentially significant. These issues will be further explored in the EIR.

b) Potentially Significant Impact. As defined by the State of California, cumulative impacts reflect "the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (CEQA Guidelines, § 15355[b]).

The degree to which Project effects would contribute to a significant cumulative impact will be evaluated in the EIR. To meet the adequacy standard established by the CEQA Guidelines Section 15130, the EIR will identify past, present, and reasonably probable future projects producing related or cumulative impacts. Other projects or plans in the geographic scope of the proposed Project area may include projects in the Pajaro River watershed, including Pacheco Creek; San Clara County; and San Benito County.

c) Potentially Significant Impact. Construction activities of the proposed Project could potentially have significant impacts on air quality, agricultural and forestry resources, biological resources including— special-status plant and animal species, cultural resources, geology/soils, greenhouse gas emissions, hazards and hazardous materials, hydrology/water quality, land use/planning, noise, transportation/traffic, tribal cultural resources, and utilities.

Proposed Project operation could potentially have significant impacts on biological resources and hydrology/water quality.

After completion, the proposed Project would substantially benefit people by providing increased water supply reliability and protection against flooding impacts. However, the Project construction could potentially have both direct and indirect adverse effects on human beings. Therefore, impact is considered potentially significant. These issues will be further explored in the EIR.

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CHAPTER 3 LIST OF INITIAL STUDY PREPARERS

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Tiffany Hernandez	Reviewer; Environmental Planner
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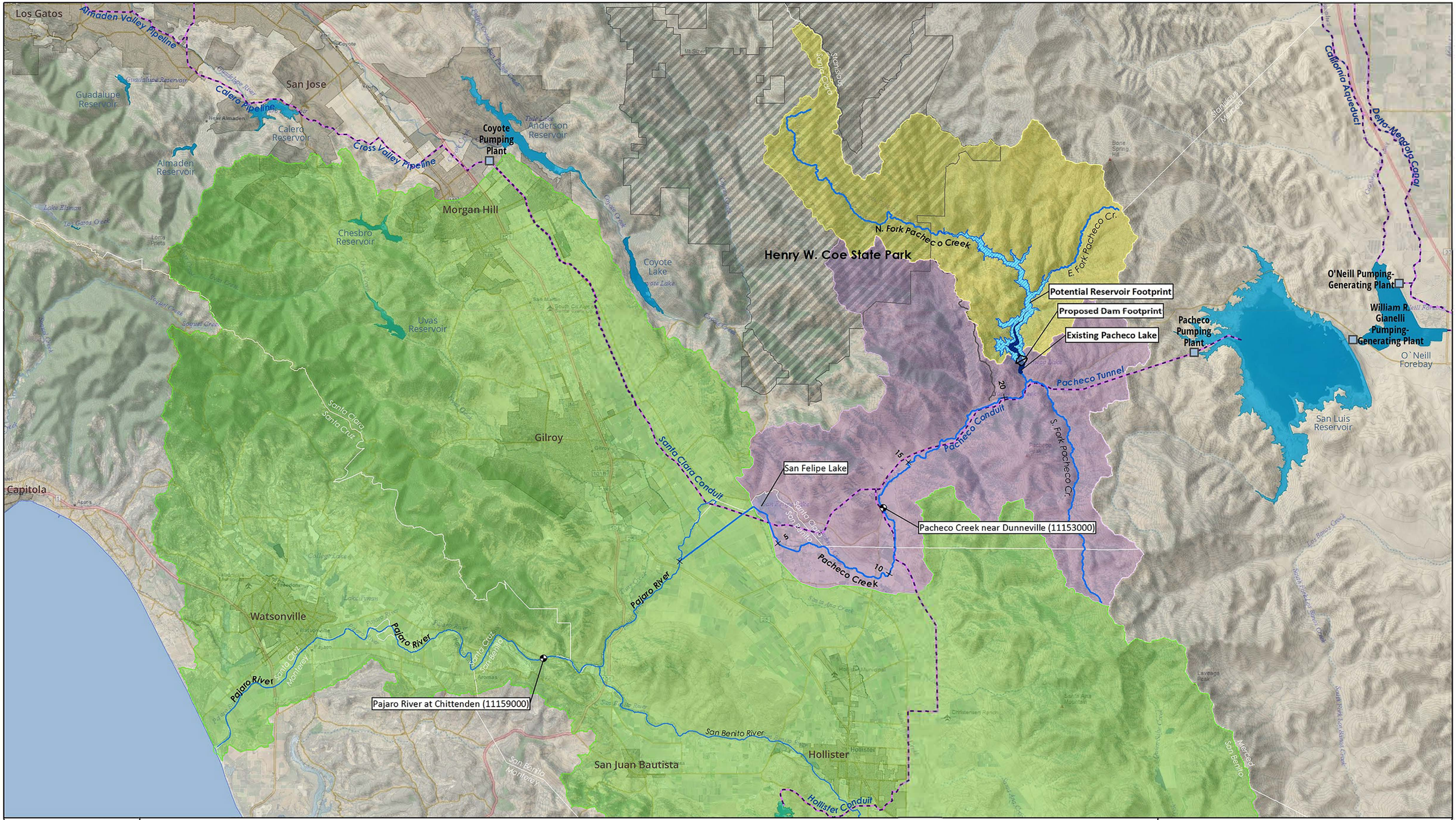
Santa Clara Valley Water District

Pacheco Reservoir Expansion Project
Initial Study and NOP Exhibits

August 2017



Santa Clara Valley Water District

Stantec

- Selected USGS Gage Station
- Existing Pump Station
- Existing Tunnel/Pipeline

Affected Watersheds

- Pajaro River below Pacheco Creek *(Includes San Benito River Shed - not shown in its entirety)*
- Pacheco Creek below Proposed Dam
- North Fork Pacheco Creek above Proposed Dam

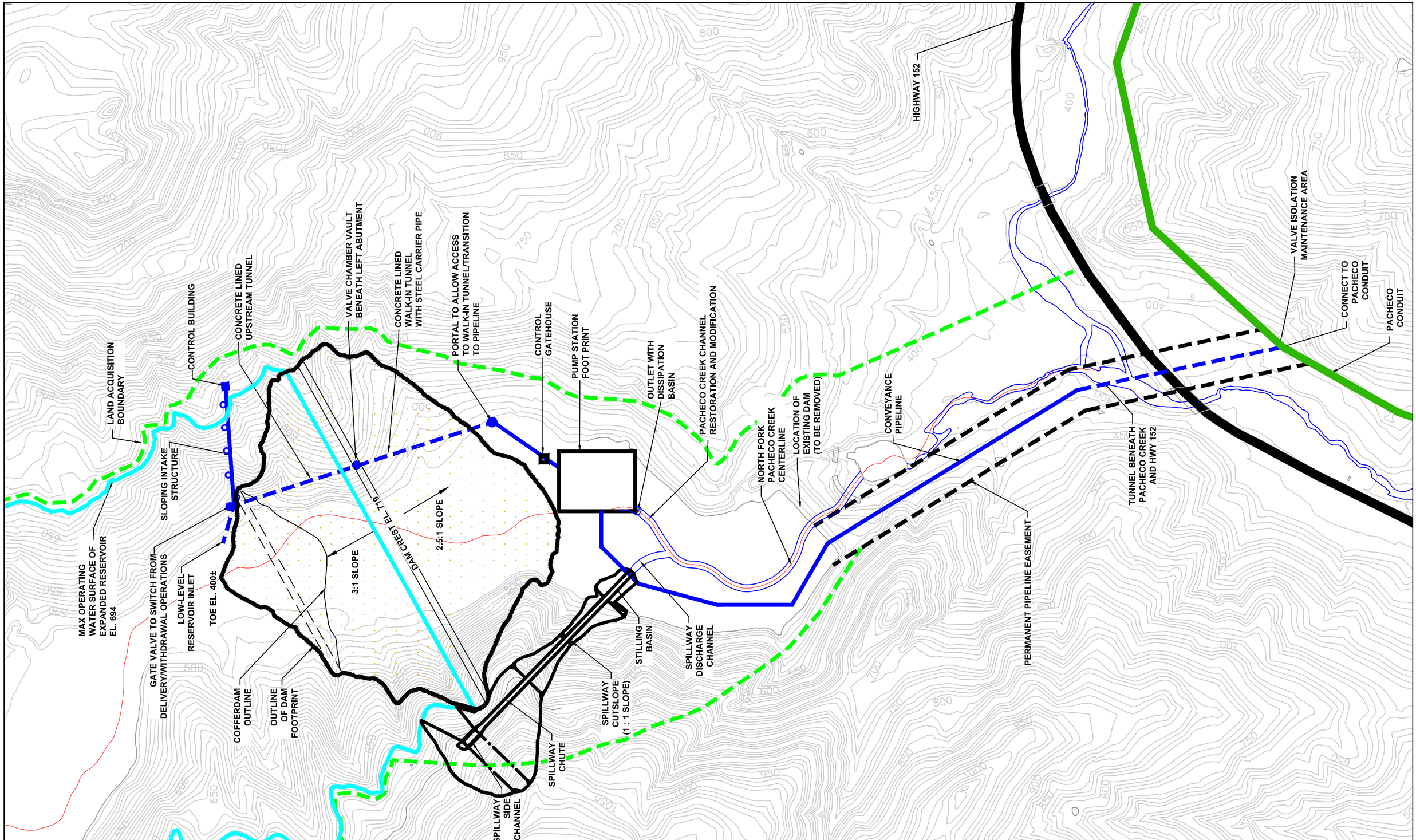
N 0 1.5 3 6 Miles

Prepared: July, 2017
Projection: CA SP III NAD83
Background: DeLorme (Copyright © 2015)
G:\SCVWD_MXDs_Reports\Prop1\Project_Overview_20170725.mxd

Exhibit 1

PROJECT GEOGRAPHIC OVERVIEW

PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017



Stantec

N

SCALE:
1"=500'
0 500

Santa Clara Valley Water District

MAX. WATER SURFACE ELEVATION OF 694 FT
LAND ACQUISITION BOUNDARY
PERMANENT PIPELINE EASEMENT BOUNDARY
EXISTING PACHECO CONDUIT
PACHECO AND NORTH FORK PACHECO CREEK
PACHECO AND NORTH FORK PACHECO CREEK

Exhibit 2

PROJECT SITE FEATURES
PACHECO RESERVOIR EXPANSION
PROJECT AUGUST 2017

Henry W. Coe State Park

Canada de los Osos Ecological Reserve

Cottonwood Creek Wildlife Area

San Luis Reservoir Wildlife Area

Pacheco State Park

Private

Proposed Dam Site

Pump Station

Dam Spillway

Area of Existing Reservoir to be Drained

Lower Pacheco Dam Site *(Existing North Fork Dam)*

Conveyance Pipeline

Connect to Pacheco Conduit

Pacheco Tunnel

Pacheco Conduit

Henry Coe State Park Rd

Red Mountain Rd

Finrald Rd

El Toro Rd

Whiskey Flat Rd

Dinosaur Point Rd

152

Santa Clara Valley Water District

Stantec

Existing Tunnel/Pipeline

Proposed Tunnel/Pipeline

Proposed Dam Footprint

Potential Reservoir Footprint

Proposed Dam Contributing Watershed

Private Parcel

State Lands

- State Park
- Canada de los Osos Ecological Reserve
- Cottonwood Creek Wildlife Area
- San Luis Reservoir Wildlife Area

N

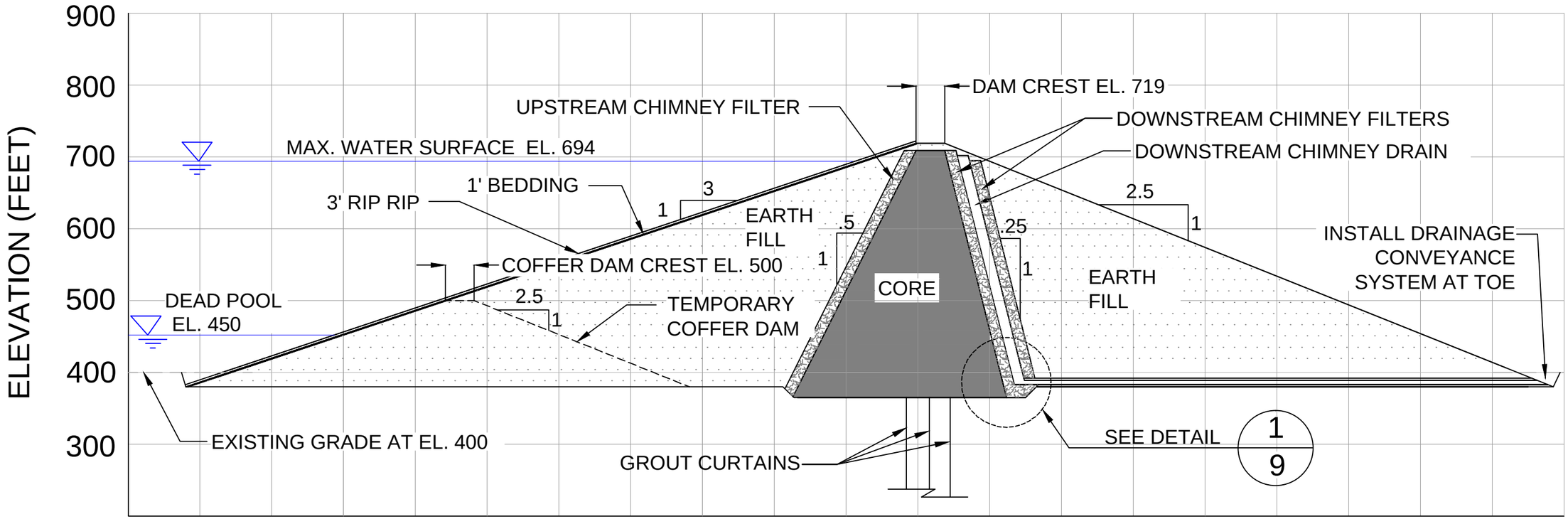
0 2,000 4,000 6,000 Feet

Prepared: July, 2017
Projection: UTM Zone 10 NAD83
Parcel Data: Santa Clara Co. Assessor (2014)
Cons. Easement: TNC (2017)
State Lands: CaSIL (2016)
Background: NAIP (2016)
G:\SCVWD_MXDs_Reports\Prop1\ReservoirArea_AltA_20170725.mxd

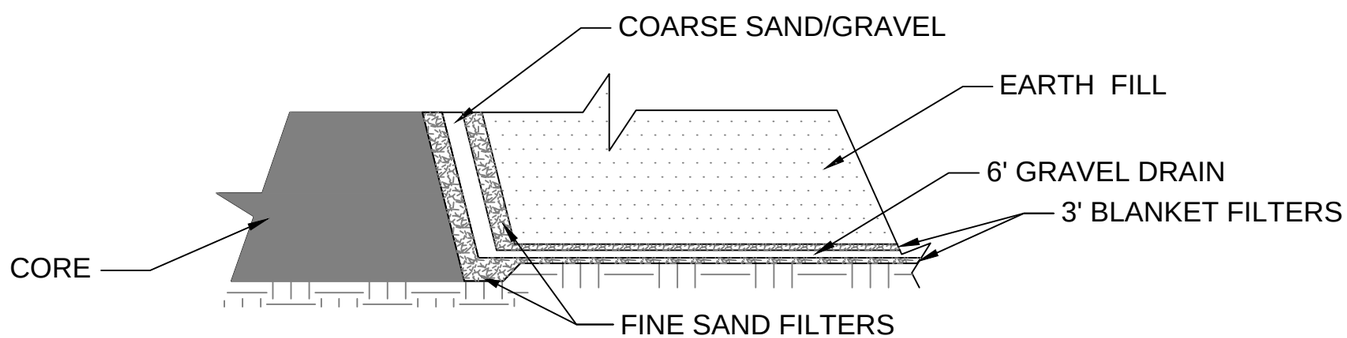
Exhibit 3

RESERVOIR PLAN VIEW

PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017



CROSS SECTION OF ZONED DAM EMBANKMENT



DETAIL 1/9

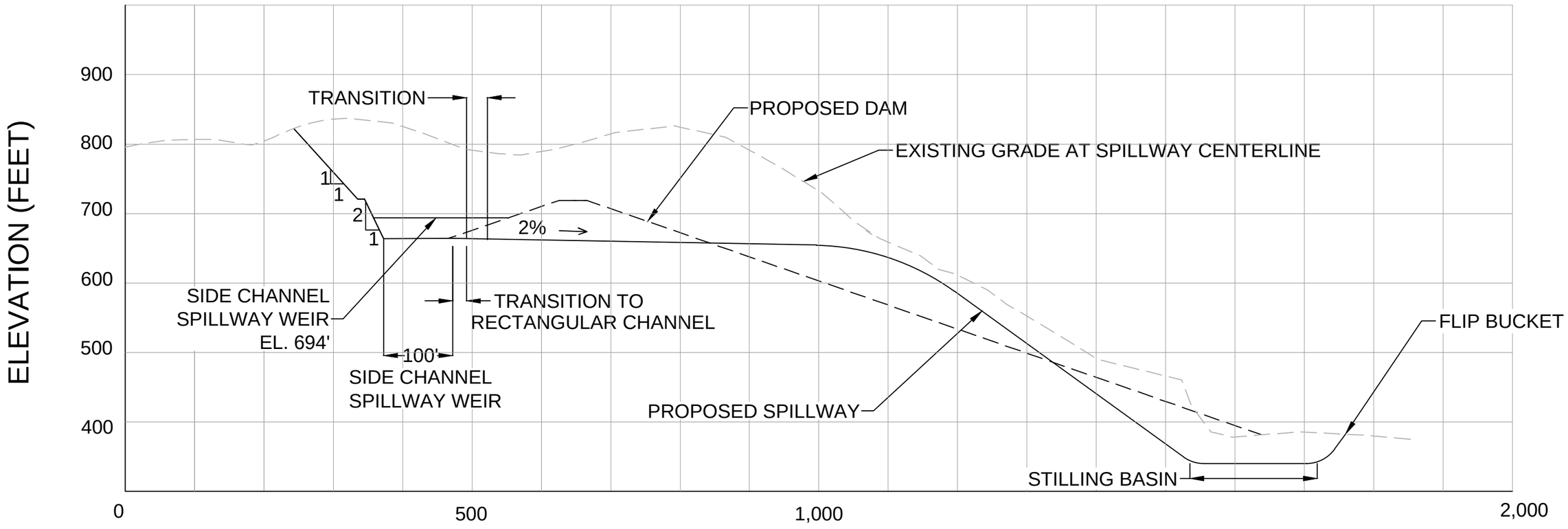
NTS

Stantec

Santa Clara Valley Water District

Exhibit 4

CROSS SECTION OF DAM EMBANKMENT
PACHECO RESERVOIR EXPANSION
PROJECT AUGUST 2017



HORIZONTAL DISTANCE (FEET)

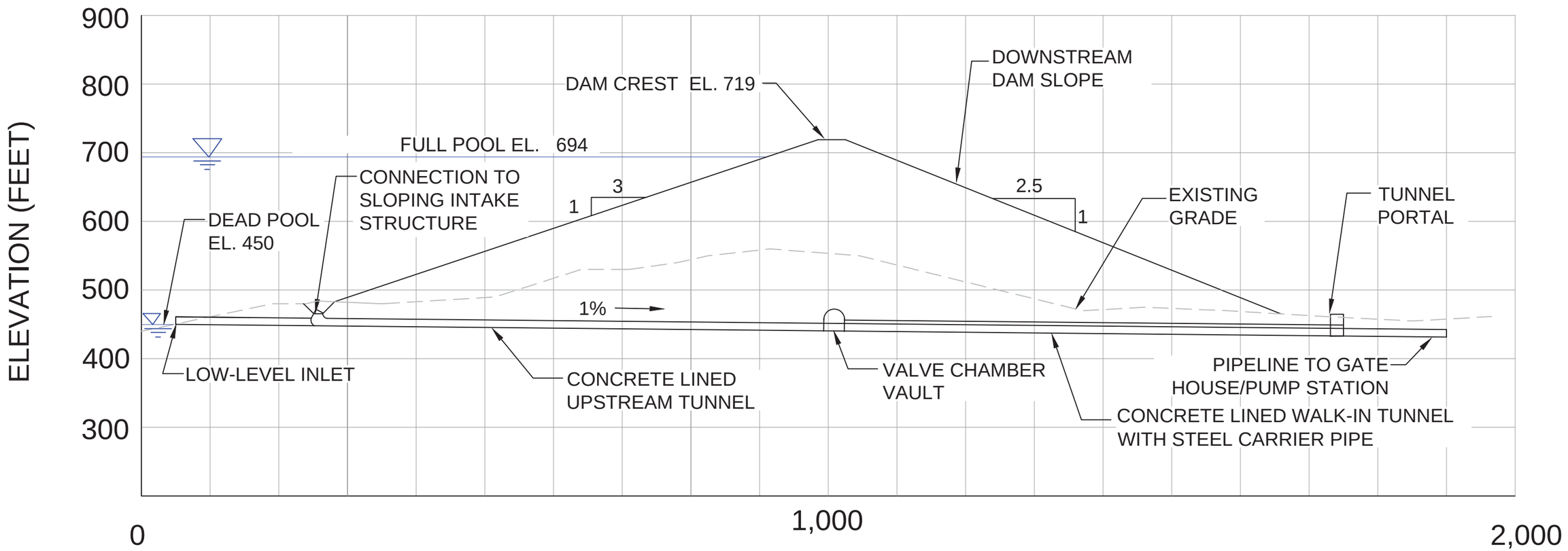
Stantec

SCALE:
1"=150'
0 75 150

Santa Clara Valley Water District

Exhibit 5

SPILLWAY PROFILE
PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017



PROFILE - OUTLET TUNNEL

Stantec

SCALE:
1"=150'
0 75 150

Santa Clara Valley Water District

Exhibit 6

OUTLET TUNNEL PROFILE
PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017

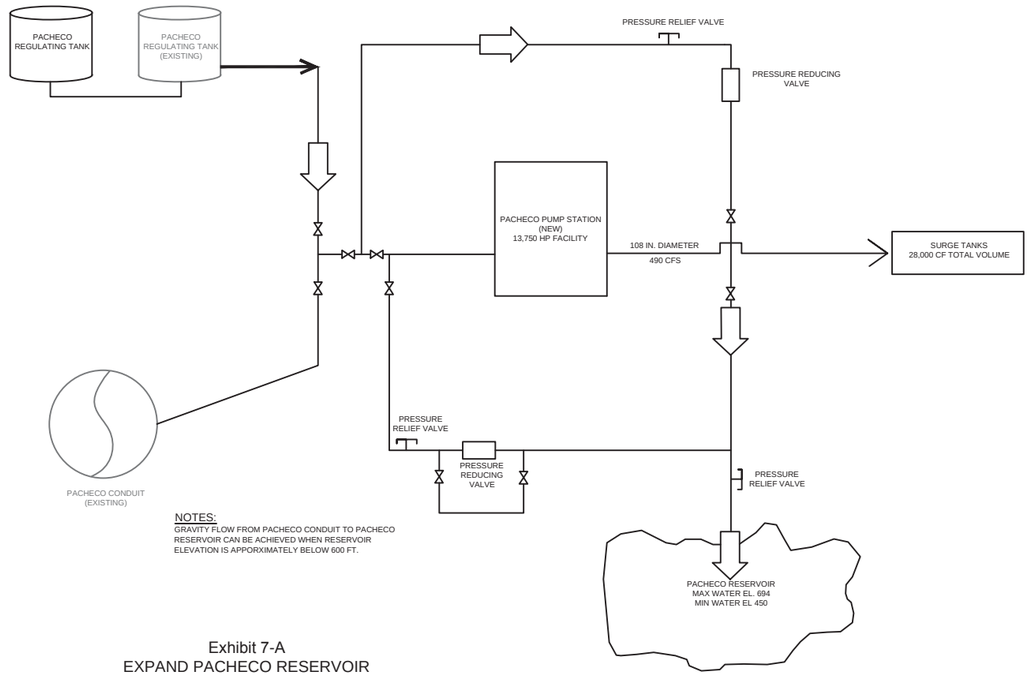


Exhibit 7-A
EXPAND PACHECO RESERVOIR
GRAVITY FLOW TO PACHECO RESERVOIR FLOW SCHEMATIC

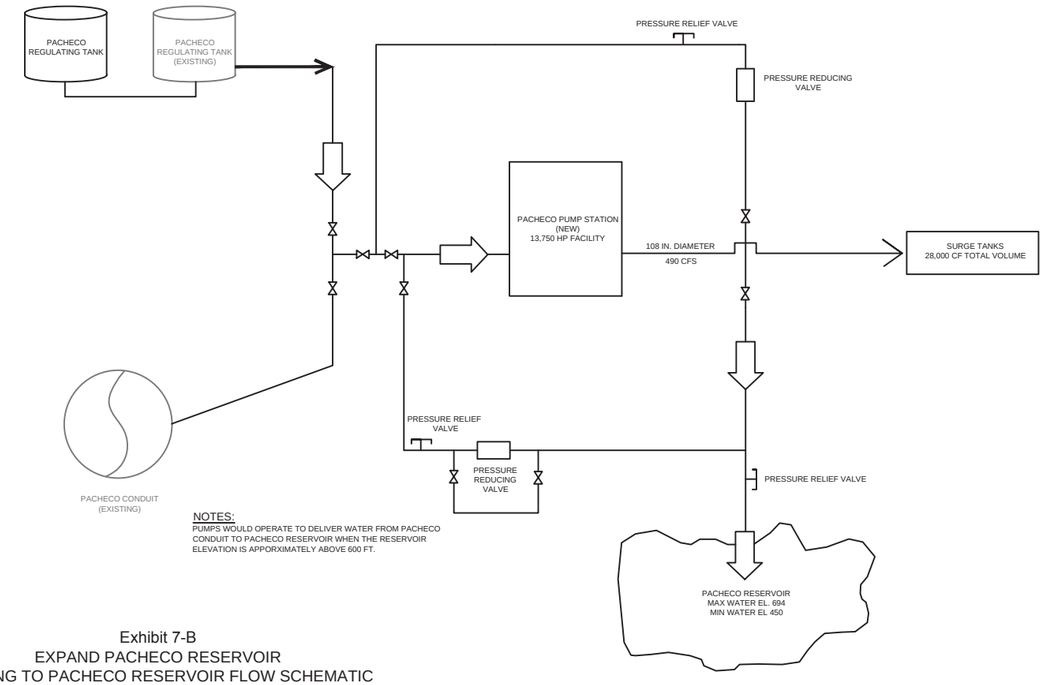


Exhibit 7-B
EXPAND PACHECO RESERVOIR
PUMPING TO PACHECO RESERVOIR FLOW SCHEMATIC

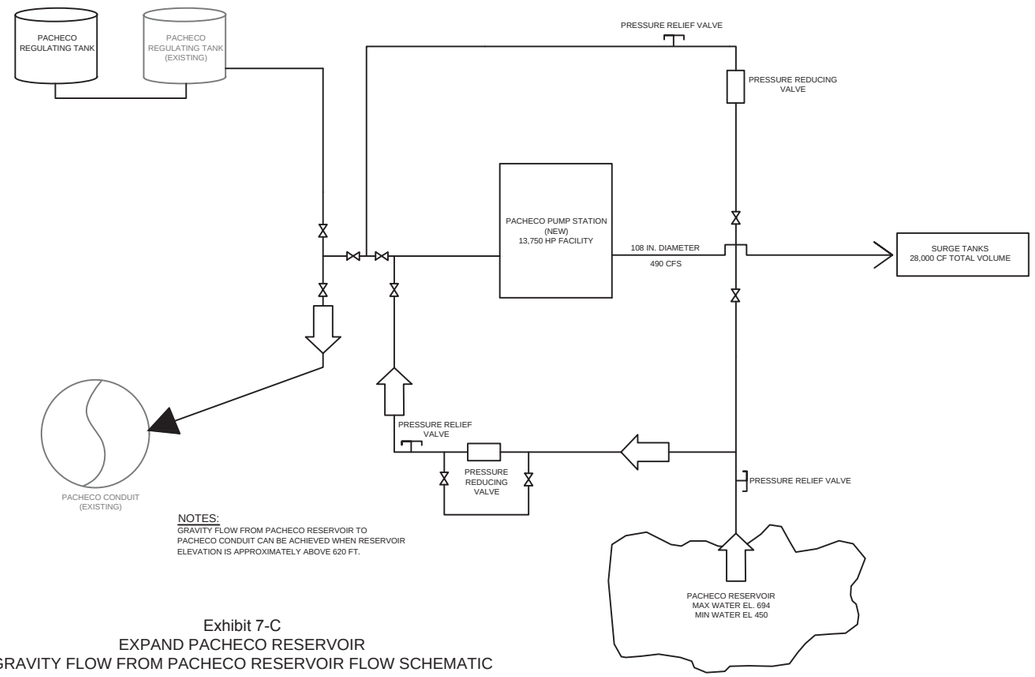


Exhibit 7-C
EXPAND PACHECO RESERVOIR
GRAVITY FLOW FROM PACHECO RESERVOIR FLOW SCHEMATIC

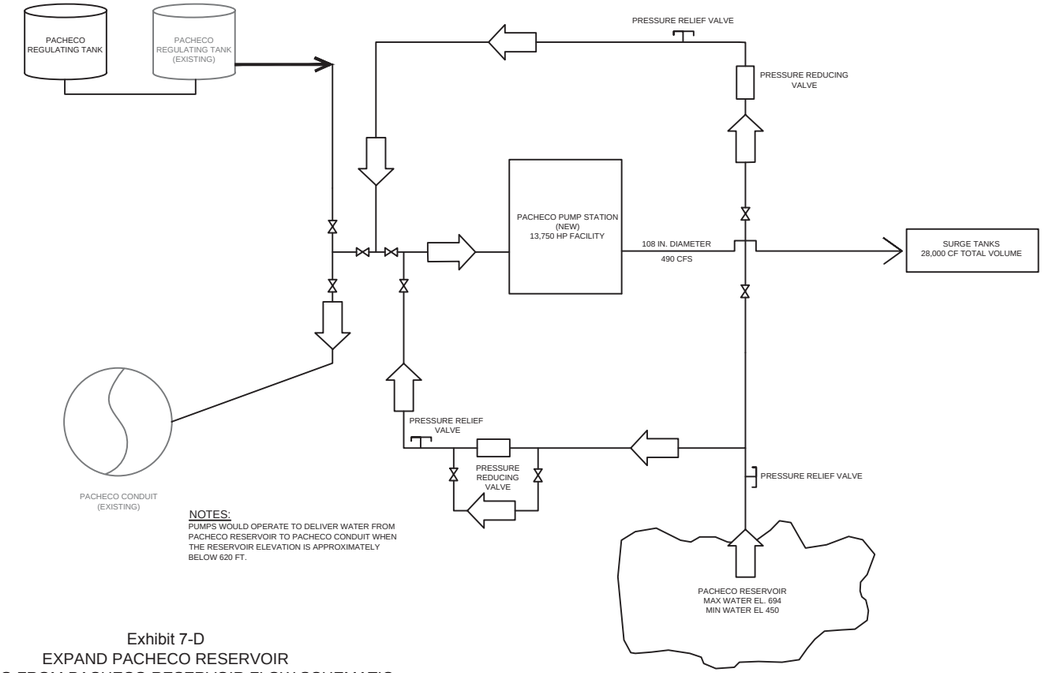


Exhibit 7-D
EXPAND PACHECO RESERVOIR
PUMPING FROM PACHECO RESERVOIR FLOW SCHEMATIC

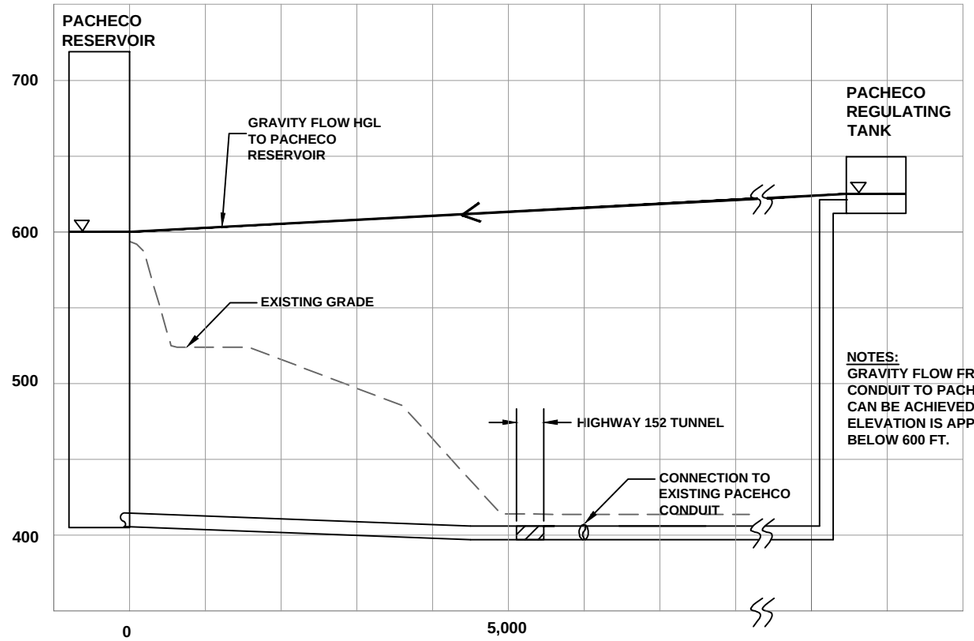
Stantec

NTS

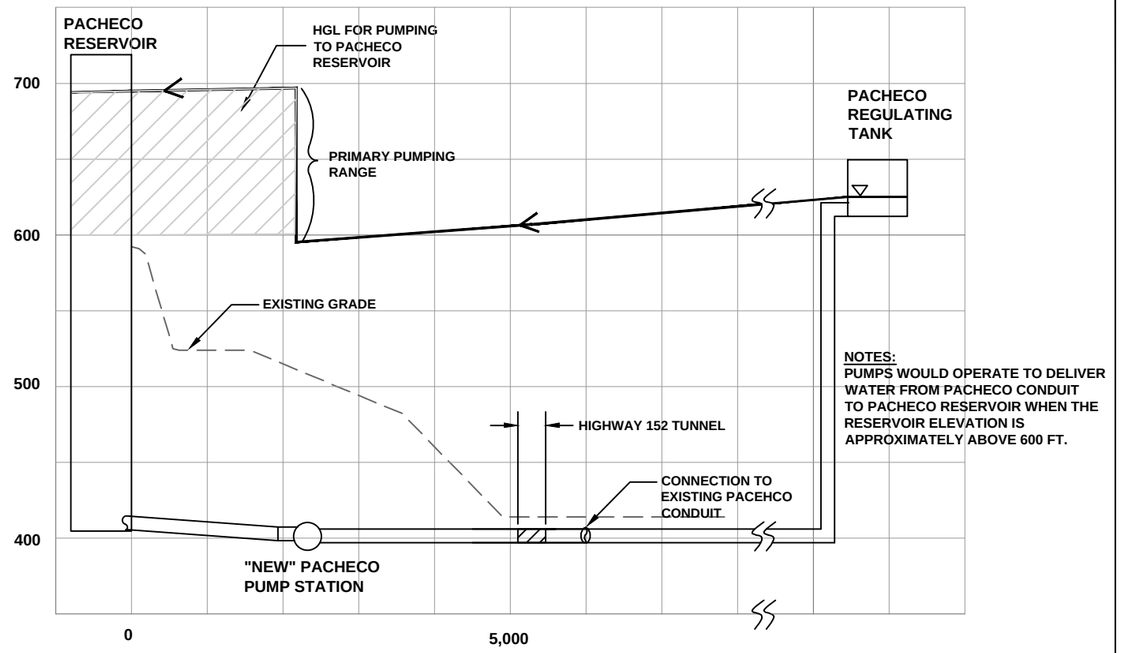
Santa Clara Valley Water District

Exhibit 7

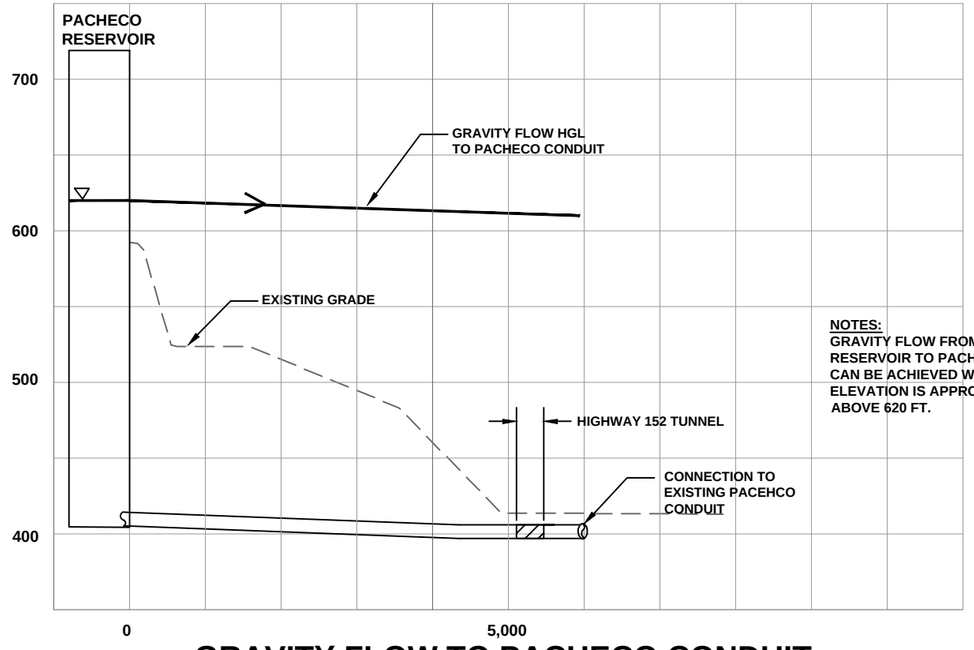
PUMP/GRAVITY FLOW DIAGRAM
PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017



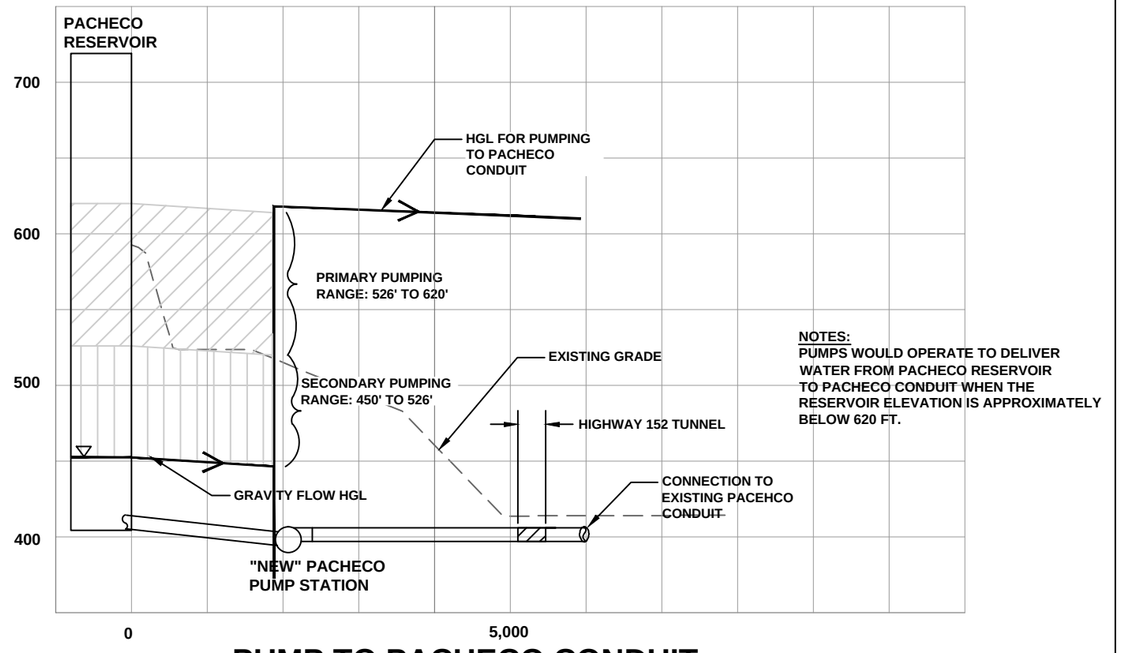
GRAVITY FLOW TO PACHECO RESERVOIR



PUMP TO PACHECO RESERVOIR



GRAVITY FLOW TO PACHECO CONDUIT



PUMP TO PACHECO CONDUIT

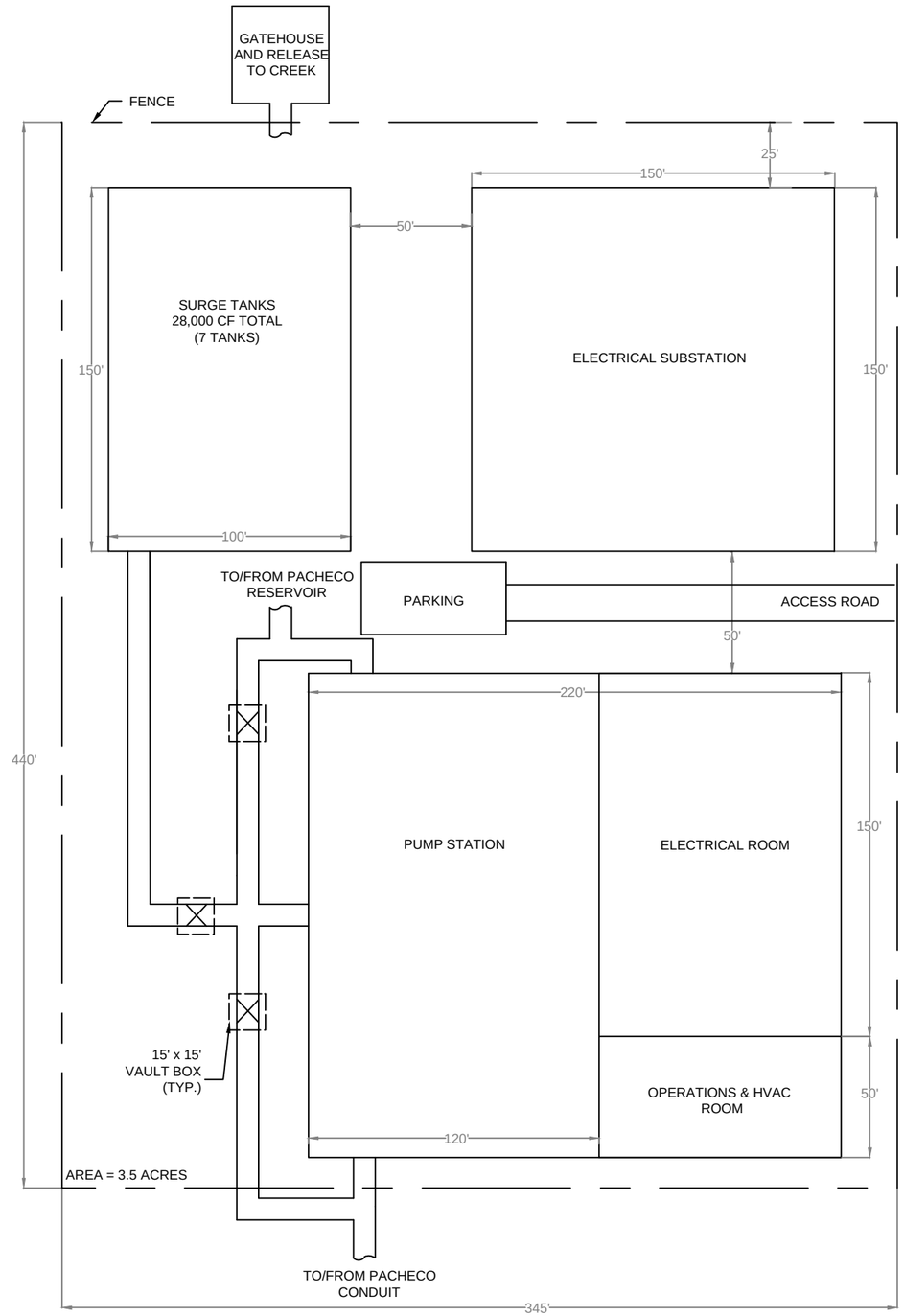
Stantec

SCALE
HOR: 1" = 2,000'
VERT: 1" = 100'

Santa Clara Valley Water District

Exhibit 8

PUMP/GRAVITY FLOW DIAGRAM
PACHECO RESERVOIR EXPANSION
PROJECT AUGUST 2017



NOTES:
1) SURGE ANALYSIS WILL BE PERFORMED TO DETERMINE THE SIZE AND NUMBER OF SURGE TANKS REQUIRED, DURING SUBSEQUENT STUDIES

Stantec

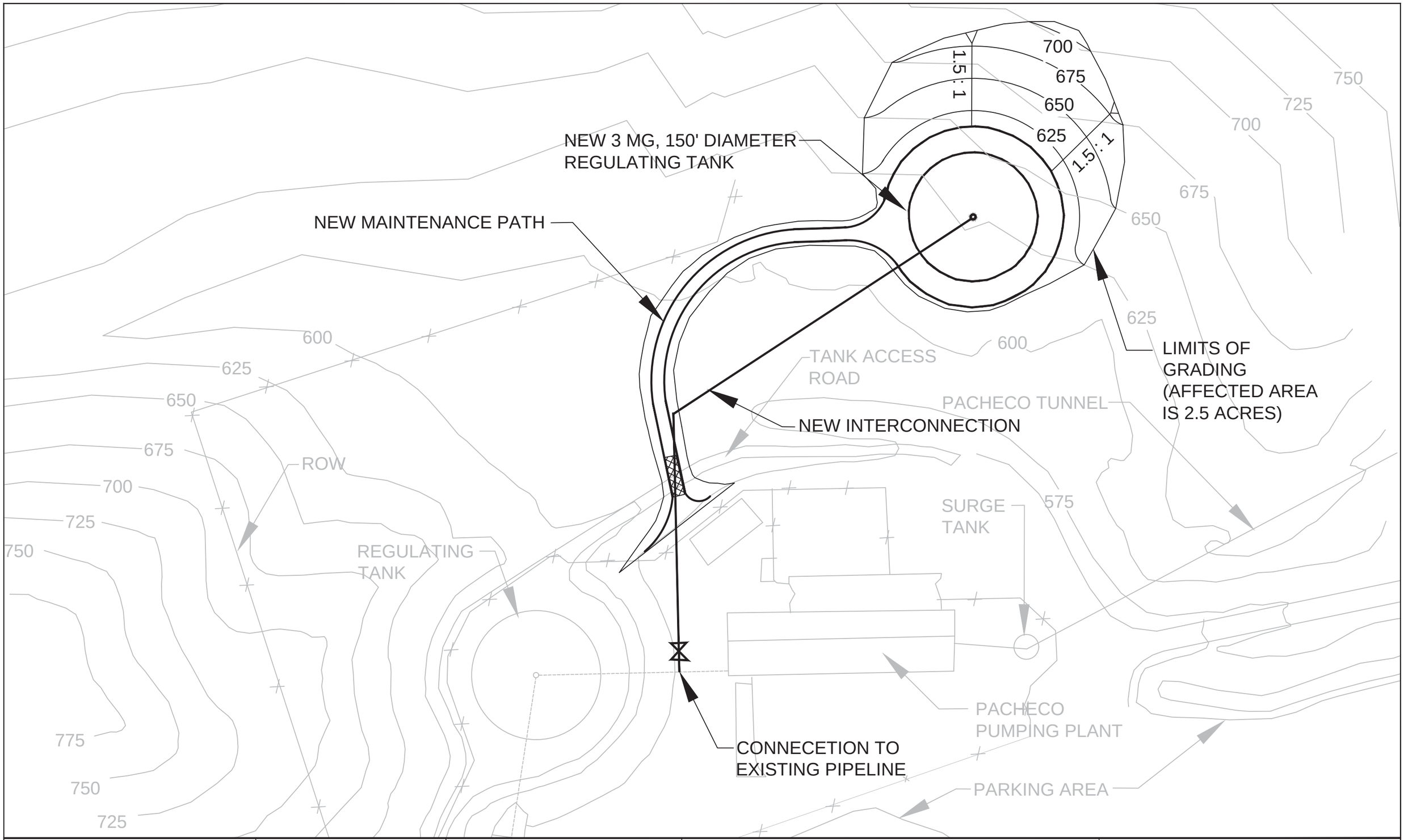
N

SCALE
1" = 60'
0 30 60

Santa Clara Valley Water District

Exhibit 9

PUMP STATION LAYOUT
PACHECO RESERVOIR EXPANSION
PROJECT AUGUST 2017



Stantec

N

SCALE
1" = 100'
0 100

Santa Clara Valley Water District

LEGEND

EXISTING FEATURES
NEW REGULATING TANK & MAINTENANCE PATH
NEW CONTOURS

Exhibit 10

REGULATING TANK AT PACHECO PUMPING PLANT
PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017

Henry W. Coe State Park

Temporary Haul Road

Proposed Dam Site

Pump Station

Conveyance Pipeline

Pacheco Tunnel

Pacheco Conduit

Santa Clara Valley Water District

Stantec

- Existing Tunnel/Pipeline
- Proposed Tunnel/Pipeline
- Temporary Haul Road
- Proposed Dam Footprint
- Potential Reservoir Footprint
- Existing Pacheco Lake above Proposed Dam
- Contributing Watershed
- Henry W. Coe State Park

Borrow Areas

- Potential Impervious Zone Source *(Landslides and Franciscan Melange)*
- Potential Random Zone Source
- Potential Rock Source

N

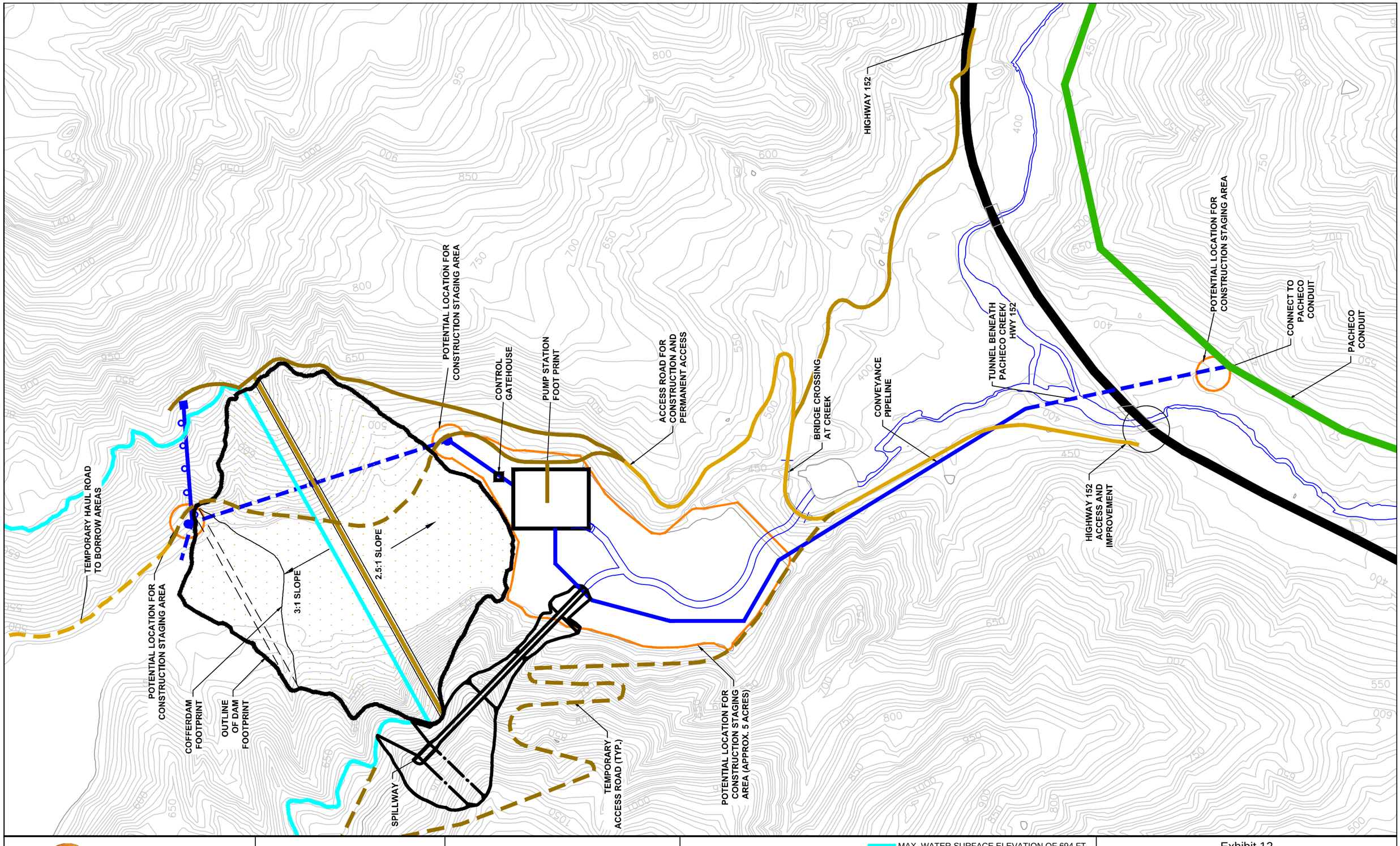
0 2,000 4,000 6,000 Feet

Prepared: July, 2017
Projection: CA SP III NAD83
Lanslide Data: Cotton (1972)
Borrow Areas: Wahler (1993)
Background: USGS 7.5' Topo
G:\SCVWD_MXDs_Reports\Prop1\ReservoirBorrowAreas_AltA_20170725.mxd

Exhibit 11

BORROW AREAS

PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017



Stantec

N

SCALE:
1"=500'
0 500

Santa Clara Valley Water District

EXISTING PACHECO CONDUIT
IMPROVEMENT OF EXISTING ACCESS ROAD (TEMPORARY)
NEW ACCESS ROAD (TEMPORARY)
MAX. WATER SURFACE ELEVATION OF 694 FT
IMPROVEMENT OF EXISTING ACCESS ROAD (PERMANENT)
NEW ACCESS ROAD (PERMANENT)
POTENTIAL STAGING AREAS

Exhibit 12

CONSTRUCTION ACCESS AND STAGING AREAS
PACHECO RESERVOIR EXPANSION PROJECT
AUGUST 2017

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX

July 5, 2017

Melih Ozbilgin
Santa Clara Valley Water District

Email to: mozbilgin@valleywater.org

RE: Native American Consultation, Pursuant to Assembly Bill 52, Public Resources Code Sections 21080.1, 21080.3.1 and 21080.3.2, Pacheco Reservoir Expansion Project, Santa Clara and San Benito Counties

Dear Ms. Ozbilgin:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent of the referenced codes is to avoid and or mitigate impacts to tribal cultural resources, as defined, in the California Environmental Quality Act (CEQA).

As of July 1, 2015, Public Resources Code Sections 21080.1, 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding or mitigating impacts to tribal cultural resources:

> Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.1(d))

The law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC also believes that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the Area of Potential Effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources that have already been recorded or are adjacent to the APE, such as known archaeological sites;

   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;

   - Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and

- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measures.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.

3. The results of the Sacred Lands File (SFL) check conducted through the Native American Heritage Commission had a positive result. For more information about this/these site(s), please contact the Amah Mutsun Tribal Band, the Ohlone/Coastanoan-Esselen Nation at (805) 629-5189, The Coastanoan Rumsen Carmel Tribe at (909) 524-8041, and the Ohlone Indian Tribe.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive. A negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we are able to assure that our consultation list remains current.

If you have any questions, please contact me at my email address: frank.lienert@nahc.ca.gov.

Sincerely,

Frank Lienert
for Associate Governmental Program Analyst

Native American Heritage Commission
Tribal Consultation List
July 5, 2017

Amah MutsunTribal Band
Valentin Lopez, Chairperson
P.O. Box 5272
Galt , CA 95632
vlopez@amahmutsun.org
(916) 743-5833

Ohlone/Costanoan
Northern Valley Yokuts

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister , CA 95024
ams@indiancanyon.org
(831) 637-4238

Ohlone/Costanoan

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road
Woodside , CA 94062
amahmutsuntribal@gmail.com
(650) 851-7489 Cell
(650) 851-7747 Office

Ohlone/Costanoan

North Valley Yokuts Tribe
Katherine Erolinda Perez, Chairperson
P.O. Box 717
Linden , CA 95236
canutes@verizon.net
(209) 887-3415

Ohlone/Costanoan
Northern Valley Yokuts
Bay Miwok

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
P.O. Box 360791
Milpitas , CA 95036
muwekma@muwekma.org
(408) 314-1898
(510) 581-5194

Ohlone / Costanoan

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3152
Fremont , CA 94539
chochenyo@AOL.com
(510) 882-0527 Cell

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Public Resources Code Sections 210080.1, 21080.3.1 and 21080.3.2.
Pacheco Reservoir Expansion Project, Santa Clara County

Native American Heritage Commission
Tribal Consultation List
July 5, 2017

Amah MutsunTribal Band
Valentin Lopez, Chairperson
P.O. Box 5272 — Ohlone/Costanoan
Galt , CA 95632 — Northern Valley Yokuts
vlopez@amahmutsun.org
(916) 743-5833

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road — Ohlone/Costanoan
Woodside , CA 94062
amahmutsuntribal@gmail.com
(650) 851-7489 Cell
(650) 851-7747 Office

Xolon-Salinan Tribe
Karen White, Council Chairperson
PO Box 7045 — Salinan
Spreckels , CA 93962
blukat41@yahoo.com
831-238-1488

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28 — Ohlone/Costanoan
Hollister , CA 95024
ams@indiancanyon.org
(831) 637-4238

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Public Resources Code Sections 210080.1, 21080.3.1 and 21080.3.2.
Pacheco Reservoir Expansion Project, San Benito County

United States Geologic Survey. *Preliminary Geologic Description of the San Jose 30 X 60 Minute Quadrangle* by Carl Wentworth, Clark Blake, Robert McLaughlin, and Russell Graymer. Open-File Report 98-795, U.S. Geologic Survey. California, US.

Wahler and Associates. 1993. *Reconnaissance Level Evaluation of Alternative Dam and Reservoir Site.*

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Draft Environmental Impact Report

Appendix

Public and Agency Scoping Process Summary

Attachment B

Public Scoping Comments

Pacheco Reservoir Expansion Project

November 2021

Contents

Section 1. State Agencies

1.1 California Department of Fish and Wildlife 1

From: brenda.blinn@wildlife.ca.gov
Sent: Tuesday, August 29, 2017 1:43 PM
To: Melih Ozbilgin; Mayra.Molina
Subject: RE: NOP Pacheco Reservoir Expansion Project, SCH# 2017082020

Follow Up Flag: Follow up
Flag Status: Flagged

Thank you, Melih.

Brenda

-----Original Message-----
From: Melih Ozbilgin [mailto:MOzbilgin@valleywater.org]
Sent: Tuesday, August 29, 2017 1:01 PM
To: Molina, Mayra@Wildlife <Mayra.Molina@Wildlife.ca.gov>
Cc: Blinn, Brenda@Wildlife <Brenda.Blinn@wildlife.ca.gov>
Subject: Re: NOP Pacheco Reservoir Expansion Project, SCH# 2017082020

Mayra,
Thank you for your interest in our project. We will take your comments on 11th. I am on vacation and will check the discrepancy when I get back next week.
Melih

On Aug 25, 2017, at 12:47 PM, Molina, Mayra@Wildlife <Mayra.Molina@Wildlife.ca.gov<mailto:Mayra.Molina@Wildlife.ca.gov>> wrote:

Hi Melih,

I am emailing you to clarify the deadline to submit comments for the Notice of Preparation of a Draft Environmental Impact Report for the Pacheco Reservoir Project, SCH # 2017082020. The Notice of Completion & Environmental Document Transmittal Form has a public review deadline date of September 11, 2017, but the State Clearinghouse Data Base Document has a date of September 5, 2017. CDFW will be submitting comments and would prefer the September 11, 2017 date but would like to confirm this date with you.

Thank you,

Mayra Molina
Environmental Scientist
CA Department of Fish and Wildlife - Bay Delta Region Habitat Conservation Program
7329 Silverado Trail
Napa, CA 94558
(707) 944-5596
Mayra.Molina@wildlife.ca.gov<mailto:Mayra.Molina@wildlife.ca.gov>

<image001.png>

1.2 California Department of Fish and Wildlife 2

State of California – The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
7329 Silverado Trail
Napa, CA 94558
(707) 944-5500
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

September 7, 2017

Mr. Melih Ozbilgin
Senior Water Resources Specialist
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118
mozbilgin@valleywater.org

Dear Mr. Ozbilgin:

Subject: Pacheco Reservoir Expansion Project, Notice of Preparation of a Draft Environmental Impact Report, SCH #2017082020, Santa Clara County

The California Department of Fish and Wildlife (CDFW) reviewed the Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) provided for the Pacheco Reservoir Expansion Project (Project) located in unincorporated Santa Clara County. The NOP was received in our office on August 9, 2017.

CDFW is a Trustee Agency with responsibility under the California Environmental Quality Act (CEQA) §15386 for commenting on projects that could impact fish, plant and wildlife resources. CDFW is also considered a Responsible Agency if a project would require discretionary approval, such as the California Endangered Species Act (CESA) Permit, the Native Plant Protection Act, the Lake and Streambed Alteration Agreement (LSAA) and other provisions of the Fish and Game Code that afford protection to the State's fish and wildlife trust resources. Pursuant to our jurisdiction, CDFW has the following concerns, comments, and recommendations regarding the Project.

PROJECT DESCRIPTION AND LOCATION

Background: The existing Pacheco Reservoir and North Fork Dam were constructed in 1939 by Pacheco Pass Water District (PPWD) to provide irrigation and domestic water supply. The existing Pacheco Reservoir has an operational capacity of 5,500-acre feet (AF) and inundates an area of approximately 192 acres. Water released from the Pa

acheco Reservoir flows down
derlying groundwater aquifer
eased flow is controlled to fully
in Santa Clara County and
n PPWD and San Benito
n the aquifer. Historic
nerally effective for recharging
as served by Pacheco

Pacheco Creek and seeps through the creek bed and into the ur
as it winds towards its confluence with the Pajaro River. The rel
infiltrate into a groundwater aquifer that begins at the northern tip
extends southwards into San Benito County. Agricultural users i
County Water District's (SBCWD) service areas, pump water fro
operation strategies for Pacheco Reservoir were informal, but ge
the groundwater basin. However, water supply needs in the are
Reservoir have changed since it was first constructed.

Clara Valley Water District
ges in the San Joaquin River

The primary partners for the proposed Project include the Santa
(SCVWD), PPWD, SBCWD, and eight south-of-Delta wildlife refu

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Conserving California's Wildlife S

watershed in the Central Valley Project Improvement Act that are managed by the U.S. Fish and Wildlife Service (USFWS), CDFW, and the landowners of privately owned and managed wetlands in the Grassland Resources Conservation District.

The existing Pacheco Reservoir is located in unincorporated Santa Clara County, approximately 17 miles northeast of the City of Gilroy and 1 mile north of State Route 152 (SR 152). Pacheco Reservoir is situated on the North Fork of Pacheco Creek. Pacheco Creek has its headwaters in the Diablo Range, northeast of the City of Hollister. Downstream of Pacheco Reservoir, North Fork Pacheco Creek is joined by South Fork Pacheco Creek, forming Pacheco Creek. Pacheco Creek continues to flow west until it reaches San Felipe Lake, which drains approximately 168 square miles in Santa Clara and San Benito counties.

San Luis Reservoir is located 8 miles east of Pacheco Reservoir in unincorporated Merced County. The U.S. Department of the Interior, Bureau of Reclamation owns and jointly operates San Luis Reservoir with the California Department of Water Resources. San Luis Reservoir is capable of receiving water from both the Delta-Mendota Canal and the California Aqueduct. Deliveries from San Luis Reservoir also flow west through Pacheco Pumping Plant and Conduit to the San Felipe Division of the Central Valley Project (CVP), which includes SCVWD and SBCWD.

Objective: The objective of the Project is to provide local and regional environmental, water supply reliability, and water quality benefits. These benefits include ecosystem improvements in Pacheco Creek for the federally threatened South-Central California Coast (SCCC) steelhead (*Oncorhynchus mykiss*); increased water supplies for the Refuge Water Supply Program to support wetland-dependent wildlife populations; improved municipal and industrial water supply reliability, including during drought periods and emergencies; reduced San Luis Reservoir low point issues and improved water quality for the San Felipe Division of the CVP; and reduced flood risk along Pacheco Creek.

The proposed Project would consist of the following major components:

- New dam and reservoir (zoned earthfill dam with an embankment volume of 12,475 cubic yards (CY), dam crest length of 2,212 feet, and embankment height of 319 feet);
- New pump station [pump capacity of 490 cubic feet per second (cfs)];
- Pipeline/tunnels (length of 4,700 feet, and diameter of 108 inches);
- New regulating tank for the Pacheco Pumping Plant (capacity of 3 million gallons, and diameter of 150 feet); and
- Access improvements (including temporary access roads 25 feet wide and 1.2 – 5.7 miles long, and permanent access roads of 40 feet wide and 2.7 miles long).

The proposed new dam and reservoir will be constructed on Pacheco Creek 0.5 miles upstream of the existing North Fork Dam, and will inundate most of the existing Pacheco Reservoir. Project construction activities will primarily be conducted in and around Pacheco Reservoir, with some construction occurring under and over SR 152. In addition, construction activities will also occur at the Pacheco Pumping Plant near San Luis Reservoir.

The proposed total storage for the new reservoir is 141.6 thousand-acre-feet (TAF), with an active storage of 140.8 TAF. The full pool elevation will be 694 feet and will inundate an

additional 1,245 acres, for a total of 1,385 total acres. Water will be collected in the new reservoir during the winter months from runoff from the local watershed area, and diversion of CVP supplies from Pacheco Pipeline, when needed.

In addition, the existing North Fork Dam is proposed to be removed as part of the Project and the historical Pacheco Creek channel is proposed to be restored between the new dam and the existing Pacheco Reservoir. Restoration of the channel would include excavating a new 1,500-foot-long, 1.7-foot-deep, 1-foot-wide, low-flow channel, and a 6-foot-deep, 20-foot-wide overbank channel to facilitate riparian restoration. The channel is proposed to be designed to reduce streambank erosion, and riparian vegetation will be planted to initiate growth of a new riparian forest along the restored channel.

Timeframe: The preliminary schedule for environmental compliance, design, permitting, land acquisition, and financial and institutional arrangements are anticipated to be completed in 2023. Construction is anticipated to take approximately 5.5 years from 2024 – 2028. The estimated on-line date is 2029.

CDFW Comments: The CEQA Guidelines (§§15124 and 15378) require that the draft EIR incorporate a full project description, including reasonably foreseeable future phases of the Project, and that contains sufficient information to evaluate and review the Project's environmental impact. Please include a complete description of the following Project components in the draft EIR:

- A detailed description of past flooding events that have occurred in the Pacheco Creek watershed and circumstances with the existing North Fork Dam that resulted in flooding, and how implementation of the proposed Project is expected to attenuate flooding conditions. A full description of estimated inundation area at various times of the year and under different rainfall patterns should be provided.
- A construction schedule which includes season of activity for each primary component.
- Design plans for the conveyance pipeline under SR 152, and include the elevation and depth of the pipeline as well as tunnel dimensions.
- The size and location of each borrow area.
- If blasting of hard, fractured rock is conducted to expedite excavation, the frequency and timing of the blasting over the course of Project construction, area affected should be provided.
- A detailed dewatering plan, including dimensions of the temporary cofferdam (please note that only crest elevation was provided in the NOP).
- A description of potential landslide impacts that may occur during construction and as a result of winter storms.

The draft EIR should also include the following information:

- A description of all water rights, contractual obligations and potentially vestable rights associated with the existing North Fork Dam as well as the rule curves for current flow releases at the existing dam and future releases at the new dam. This information is important in establishing the water demands on the dam and the potential impacts associated with the proposed new rebuilt and enlarged dam.

- A description of any possible changes to water utilization as part of the current CVP allotment.
- A map and description of staging areas for the removal of the North Fork Dam. Please note that Exhibit 12 only appeared to show potential staging areas for the construction of the new dam and other new facilities.
- A full description of flows that are beneficial to SCCC steelhead (see also sections below on *Environmental Setting* and *Impact Analysis and Mitigation Measures,* Page 6).
- A clear and detailed map showing all watersheds that may be impacted either negatively or positively by implementation of the proposed Project as well as during construction. The San Joaquin River Watershed is not clearly described and shown on a map in the NOP.
- A description of the hazard classification. The NOP states that, "the hazard classification depends upon the reservoir storage and dam height, and the potential for downstream damage resulting from dam failure." Since the height and reservoir storage of the new proposed dam are known, the draft EIR should address the hazard classification, potential impacts to watersheds and biological resources that may occur in the event of dam failure, and how the SCVWD plans to prepare for such a scenario.

ENVIRONMENTAL SETTING

Special-Status Species: Sufficient information regarding the environmental setting is necessary to understand the project's, and its alternative's, significant impacts on the environment (CEQA Guidelines, §§15125 and 15360). The draft EIR prepared for the Project should provide baseline habitat assessments for special-status plant, fish and wildlife species located and potentially located within the Project area and surrounding lands, including all rare, threatened, or endangered species (CEQA Guidelines, §15380).

Habitat descriptions and species profiles should include information from multiple sources: aerial imagery, historical and recent survey data, field reconnaissance, scientific literature and reports, and findings from "positive occurrence" databases such as California Natural Diversity Database (CNDDB). Based on the data and information from the habitat assessment, the CEQA document can then adequately assess which special-status species are likely to occur in the Project vicinity.

CDFW recommends that prior to Project implementation, surveys be conducted for special-status species with potential to occur, following recommended survey protocols if available. Survey and monitoring protocols and guidelines are available at: https://www.wildlife.ca.gov/Conservation/Survey-Protocol.

Botanical surveys for special-status plant species, including those listed by the California Native Plant Society (http://www.cnps.org/cnps/rareplants/inventory/), must be conducted during the blooming period for all sensitive plant species potentially occurring within the Project area and require the identification of reference populations. Please refer to CDFW protocols for surveying and evaluating impacts to rare plants available at: https://www.wildlife.ca.gov/Conservation/Plants.

Terrestrial Communities: The NOP states that the proposed Project will result in impacts to sycamore alluvial woodland and other riparian habitat, serpentine chaparral, and wetlands. The

draft EIR should include a clear and detailed map showing all habitat types present within the Project area and surrounding lands that will be affected by implementation of the Project.

Please be advised that sycamore alluvial woodland is considered a very rare and threatened habitat type, and the genetic integrity of native western sycamore (*Platanus racemosa*) is being highly compromised by hybridization with London plane tree (*P. hispanica*). This rare habitat type is found both upstream and downstream of the existing reservoir and expansion will inundate some of this community.

The draft EIR should therefore provide a detailed assessment of both direct and indirect impacts as well as both short- and long-term impacts of the Project to sycamore alluvial woodland and other sensitive natural plant communities. The draft EIR should also provide adequate compensatory mitigation for these plant communities as a result of those impacts of the Project that cannot be fully avoided. Please be advised that mitigation for impacts to sycamore alluvial woodland is considered challenging in Santa Clara County due to the difficulty in finding unhybridized seed sources. CDFW therefore recommends that if full avoidance of impacts to sycamore alluvial woodland is not possible, a specific mitigation plan should be described in the draft EIR for this habitat type and in consideration of the local difficulties in mitigating for this community. Given that the Project is located in eastern Santa Clara County, CDFW recommends considering a mitigation proposal involving acquisition, protection and management of extant pure sycamore groves in adjoining counties, if possible.

Riparian vegetation provides many important ecosystem functions; it supports habitat and cover for numerous species of wildlife, moderates temperature extremes, reduces soil erosion and sustains water quality. To address all impacts to riparian vegetation, including non-native species and trees greater than four inches in diameter, the draft EIR should provide appropriate and effective compensatory mitigation for loss of riparian habitat. To allow for a greater density and more rapid re-establishment, CDFW recommends replacement of at least a 3:1 per area impacted with phased planting and an appropriate planting palette.

The NOP also states that oak woodland habitat occurs in the vicinity of the existing reservoir. Mature oak woodland is one of the most biologically diverse and productive habitat types in California; however, oak trees typically have very slow growth rates. The biological functionality of oak woodlands may be impacted by thinning or clearing due to loss of wildlife roosting and nesting trees, encroachment by conifers, loss of acorn mast trees, and other factors. The draft EIR should clearly describe potential impacts to oak woodlands and, if necessary, develop a restoration plan that will adequately account for the slow growth rate and the quality and quantity of habitat provided by these trees.

Aquatic Communities: The NOP states that the proposed Project will result in cooler waters and improved flows in Pacheco Creek. The draft EIR should provide a detailed description of current conditions by providing metrics such as flow speeds and temperatures, and an analysis of expected future conditions. The draft EIR should provide a detailed methodology on measuring and monitoring temperature and flow and data collection monitoring locations.

If changes in utilization of water allotments are possible, for example, if the increased capacity of the new dam allows an increase in the use of the CVP allotment, the draft EIR should fully analyze the potential impacts of this increased water extraction on the SCCC steelhead runs in the source drainages.

The NOP includes the following statement on Page 2-13: "Based on modeling results, the Project could significantly improve the viability of SCCC steelhead populations through improved habitat conditions in Pacheco Creek in all year types with a long-term average increase of 158 percent over without-Project conditions (2017)." The draft EIR should include the full scientific basis for reaching these predicted estimates and describe how the dam will be operated to comply with Fish and Game Code Section 5937.

The NOP states that the proposed Project will have beneficial impacts for the San Joaquin River Watershed by supplying water to the Incremental Level 4 wildlife refuges. The draft EIR should include a detailed description of scientific analyses used to predict additional water supply and availability to this watershed and the extent of the areas and habitat types that would benefit from increased water availability.

IMPACT ANALYSIS AND MITIGATION MEASURES

The CEQA Guidelines (§15126.2) necessitate that the draft EIR discuss all direct and indirect impacts (temporary and permanent) that may occur with implementation of the Project. This includes evaluating and describing impacts such as:

- Potential for "take" of special-status species;
- Both short-term and long-term loss or modification of plant, fish and wildlife habitat, including spawning, breeding, nesting, dispersal and foraging habitats, such as vegetation removal, habitat conversion, alteration of soils, hydrology and stream morphology, and loss of both aquatic and terrestrial habitat structural features (stream substrate, overhanging banks, snags, roosts, etc.);
- Permanent and temporary habitat disturbances associated with ground disturbance, noise, lighting, reflection, air pollution, traffic or human presence; and
- Obstruction of movement corridors, fish passage, or access to water sources and other core habitat features.

The NOP (Page 2-13) references the Pacheco Habitat Suitability Model and prescribes operational flows in Table 1-2 *Average Monthly Release Targets to Pacheco Creek from Expanded Pacheco Reservoir*. CDFW recommends SCVWD ensure the model used is sufficient to investigate the effects of prescribed flows on steelhead in Pacheco Creek. Additionally, CDFW recommends that the draft EIR analyze several alternative operational scenarios that ensure flows meet the habitat needs for steelhead. Scenarios should include consideration of flows to maximize summer rearing for steelhead, pulse flows for adult steelhead passage and outmigration, and occasional channel maintenance flows to maintain geomorphic condition of channel and to activate floodplains.

Analysis of construction-related impacts of the Project to fish and wildlife addressed in the draft EIR should be specific to each Project component (e.g. dewatering, blasting, etc.) and based on the timing and seasonal work period of Project activities.

Page 2-13 of the NOP also states under *Temporary Impacts to Fisheries in the Pacheco Creek and Pajaro River*, that SCCC steelhead do not regularly occur in Pacheco Creek, therefore temporary impacts during construction may not affect the population. CDFW does not agree with this statement. Further analysis is warranted during preparation of the EIR. The draft EIR

should analyze the impacts that could occur during Project construction when the existing reservoir is removed. Removal of the existing dam could result in changes in sedimentation and creek base flow during spring and summer which could subsequently result in poorer smolt outmigration and summer rearing conditions.

The CEQA document also should identify reasonably foreseeable future projects in the Project vicinity, disclose any cumulative impacts associated with these projects, determine the significance of each cumulative impact, and assess the significance of the Project's contribution to the impact (CEQA Guidelines, §15355). Although a project's impacts may be insignificant individually, its contributions to a cumulative impact may be considerable; a contribution to a significant cumulative impact – e.g., reduction of available habitat for a listed species – should be considered cumulatively considerable without mitigation to minimize or avoid the impact.

Based on the comprehensive analysis of the direct, indirect, and cumulative impacts of the Project, the CEQA Guidelines (§§ 15021, 15063, 15071, 15126.2, 15126.4 and 15370) direct the lead agency to consider and describe all feasible mitigation measures to avoid potentially significant impacts in the draft EIR, and/or mitigate significant impacts of the Project on the environment. This includes a discussion of take avoidance and minimization measures for special-status species, which are recommended to be developed in early consultation with USFWS, the National Marine Fisheries Service and CDFW. These measures can then be incorporated as enforceable Project conditions to reduce potential impacts to biological resources to less-than-significant levels.

A description of all feasible mitigation measures to avoid potentially significant impacts, and/or mitigate significant impacts of the Project on the environment should be included in the draft EIR (CEQA Guidelines, §§ 15021, 15063, 15126.2, 15126.4 and 15370) which should include mitigation for the following habitats but is not limited to: sycamore alluvial woodland, oak woodland, wetlands, riparian, mixed serpentine chaparral, and aquatic spawning and migratory.

Fully protected species may not be taken or possessed at any time (Fish and Game Code §3511). Therefore, the draft EIR should include measures to ensure complete take avoidance of such species.

REGULATORY REQUIREMENTS

California Endangered Species Act
Please be advised that a CESA permit must be obtained if the project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (CEQA §§ 21001(c), 21083, and CEQA Guidelines §§ 15380, 15064, 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration

(FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code § 2080.

Lake and Streambed Alteration Agreement
CDFW will require an LSAA, pursuant to Fish and Game Code §§ 1600 *et. seq.* for Project-related activities within any 1600-jurisdictional waters within the proposed Project area. Notification is required for any activity that will substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. Notification will be required for both Project construction-related activities and future diversion and operation of the new dam. The notification for future diversion and operation of the new dam will require long-term bypass flows sufficient to keep fish in good condition pursuant to Fish and Game Code § 5937. CDFW, as a Responsible Agency under CEQA, will consider the CEQA document for the Project. CDFW may not execute the final LSAA until it has complied with CEQA (Public Resources Code § 21000 et seq.) as the responsible agency.

FILING FEES

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish and Game Code, § 711.4; Pub. Resources Code, § 21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.

If you have any questions, please contact Ms. Mayra Molina, Environmental Scientist, at (707) 944-5596 or mayra.molina@wildlife.ca.gov; or Ms. Brenda Blinn, Senior Environmental Scientist (Supervisory), at (707) 944-5541 or brenda.blinn@wildlifel.ca.gov.

Sincerely,

Scott Wilson

Scott Wilson
Regional Manager
Bay Delta Region

cc: State Clearinghouse #2017082020
Joel Casagrande, NOAA Fisheries
Joseph Terry, USFWS
Susan Glendening, Regional Water Quality Control Board

1.3 California Department of Transportation

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 4
OFFICE OF TRANSIT AND COMMUNITY PLANNING
P.O. BOX 23660, MS–10D
OAKLAND, CA 94623-0660
PHONE (510) 286-5528
FAX (510) 286-5559
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

October 5, 2017

04-SCL-2017-00248
SCH #: 2017082020
GTS ID: 7642

Mr. Melih Ozbilgin
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Mr. Ozbilgin:

Pacheco Reservoir Expansion Project – Notice of Preparation

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced project. In tandem with the Metropolitan Transportation Commission's (MTC) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), Caltrans new mission signals a modernization of our approach to evaluating and mitigating impacts to the State Transportation Network (STN). Caltrans Strategic Management Plan aims to reduce vehicle miles traveled (VMT) by tripling bicycle and doubling both pedestrian and transit travel by 2020. Our comments are based on the Notice of Preparation (NOP).

Project Understanding
The proposed project's main component (the dam and pump station) is located approximately 17 miles northeast of the City of Gilroy and one mile north of State Route (SR) 152 (Pacheco Pass) at approximately Post Mile 30.49 in unincorporated Santa Clara County. The project includes construction and operation of a new dam and reservoir, pump station, conveyance facilities, and related miscellaneous infrastructure (e.g., access roads).

The new dam and reservoir would be constructed on Pacheco Creek 0.5 mile upstream from the existing North Fork Dam, and would inundate most of the existing Pacheco Reservoir. Project construction activities will primarily be conducted in and around Pacheco Reservoir, with some construction occurring under and over SR 152. In addition, construction activities will also occur at Pacheco Pumping Plant near San Luis Reservoir. Site access would also include constructing new haul and access roads in conjunction with making improvements to existing roadways.

Limited staging activities for construction of the pipeline would be established adjacent to the two single-family residential properties south of the reservoir Project area. Construction

activities would result in an increase in traffic in the Project area, which could exceed the capacity of some segments in the road network. Construction personnel, equipment, and materials would travel to the site via SR 152 and access roads.

Lead Agency
As the lead agency, the Santa Clara Valley Water District (SCVWD) is responsible for all project mitigation, including any needed improvements to the STN and for VMT reduction. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures.

Traffic Impact Analysis
The NOP acknowledges transportation effects, during the estimated six-year period, would constitute a potentially significant impact by resulting in increased traffic on SR 152, and could further degrade operations at roadway locations already operating unacceptably. However, the NOP states that the traffic patterns on and access to SR 152 would return to existing conditions upon project completion.

Caltrans looks forward to coordinating with the SCVWD on the details regarding the potentially significant impacts to SR 152 and the proposed access improvements. Caltrans recommends the EIR evaluate these potential impacts to SR 152. Caltrans recommends using the Caltrans *Guide for the Preparation of Traffic Impact Studies* for determining which scenarios and methodologies to use in the analysis, available at:
www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf.

Please ensure that the TIA is prepared providing the information detailed below:

1. A vicinity map, regional location map, and site plan clearly showing project access in relation to nearby State roadways. Ingress and egress for all project components should be clearly identified. Clearly identify the State right-of-way (ROW). Project driveways, local roads and intersections, car/bike parking, and transit facilities should be mapped.

2. Project-related trip generation, distribution, and assignment. The assumptions and methodologies used to develop this information should be detailed in the study and utilize the latest place-based research. A trip generation table regarding existing demolition and new construction should be included in the TIA.

3. A schematic illustration of walking, biking and auto conditions at the project site and study area roadways, trip distribution percentages and volumes, and intersection geometrics (i.e., lane configurations). Potential safety issues for all road users should be identified and fully mitigated. The project's primary and secondary effects on pedestrians, bicycles, and disabled travelers should be evaluated. Access to pedestrians, bicycle, and transit facilities must be maintained. Although bicycles are allowed along SR 152, the highway is not commonly used as a route for bicycling or pedestrian traffic and there are no existing or proposed bicycle trails or infrastructure along SR 152.

4. Potential impacts to public transit in the project area, provided by Merced County and Santa Clara Valley Transit Authority. Several local and regional bus routes travel on SR 152 in the Cities of Gilroy and Los Banos. Heavy and slow-moving construction equipment for this project on SR 152 could decrease the performance of these buses.

5. Potential impacts to emergency vehicle access that may result from construction of the project. The proposed project would inundate a large section of an unnamed, unpaved road currently being used to access O'Connor Ranch, located upstream along Pacheco Creek. This road currently extends from SR 152 and runs north, adjacent to North Fork Pacheco Creek. Inundating this road will severely limit or completely eliminate access to some properties along the North Fork of the Creek.

Cultural Resources
The project area is sensitive for surface and buried archaeological sites, as described in the NOP Section 2.4.5 Cultural Resources. Caltrans recommends that the SCVWD conduct cultural resource technical studies that at a minimum include a records search at the Northwest Information Center of the California Historical Resources Information System (CHRIS), a field survey of the project area by a qualified archaeologist and qualified architectural historian, as well as an analysis and subsurface testing of highly sensitive areas by a qualified geoarchaeologist.

If an encroachment permit is needed for work within Caltrans ROW, we may require that cultural resource technical studies be prepared in compliance with the California Environmental Quality Act (CEQA), Public Resources Code (PRC) 5024, and the Caltrans Standard Environmental Reference (SER) Chapter 2 (http://www.dot.ca.gov/ser/vol2/vol2.htm). Should ground-disturbing activities take place within Caltrans right-of-way and there is an inadvertent archaeological or burial discovery, in compliance with CEQA, PRC 5024.5, and the SER, all construction within 60 feet of the find shall cease and the Caltrans District 4 Office of Cultural Resource Studies (OCRS) shall be immediately contacted at (510) 622-1673.

Hydraulics
Caltrans recommends the following be included in the EIR:

1. *Table 1-1 Physical Features of Major Project Components for the Pacheco Reservoir Expansion Project*: The definition for the acronym "msl" into the "Key".

2. Clarification of whether there will be any temporary flow bypass system(s) for wet seasons during the six-year construction period.

3. *Table 2-10. Hydrology Checklist, i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*: An explanation for the "Less Than Significant Impact" determination. Item "i)" concludes that the new project would be designed to meet the California Department of Water Resources Division of Safety of Dams (DSOD) standards, thereby reducing the risk of failure. However, considering the importance of this stretch of SR 152 and the devastation

the failure of this dam would cause to SR 152 and the traveling public, the risk of loss would be significant as SR 152 serves as an important interregional, recreational, commercial, agricultural, and commuter east-west route linking the San Joaquin and Santa Clara Valleys, and the traffic demand is expected to increase every year. Caltrans recommends the SCVWD reconsider this determination as a "Potentially Significant Impact," not as an indication of the safety of the dam and its construction but of the magnitude of the damage caused in the event of a failure.

4. Clarification whether the footprint of the base floodplain will be changed after the new dam is constructed and if the resulting change would have any impact to SR 152. A special flood hazard area subject to inundation by a one percent annual chance of flooding is currently downstream of the existing dam.

Transportation Management Plan
Since it is predetermined in the NOP that traffic restrictions and detours may affect SR 152, a Transportation Management Plan (TMP) and construction Traffic Impact Analysis (TIA) will be required for approval by Caltrans prior to construction. These must be prepared in accordance with Caltrans' *TMP Guidelines*. Further information is available for download at the following web address:
www.dot.ca.gov/hq/traffops/trafmgmt/tmp_lcs/index.htm.

Please ensure that such plans are also prepared in accordance with the TMP requirements of the corresponding jurisdictions. For further TMP assistance, please contact the Caltrans District 4 Office of Traffic Management Operations at (510) 286-4579.

Dike and Levee Maintenance, Repair and Upgrade
Activities involving demolition, reinforcement or rehabilitation of dikes or levees on which transportation facilities are built may potentially affect State transportation facilities. Also, built features on top of dikes and levees may contribute additional engineering considerations related to weight loading or compaction. These factors must be addressed through geotechnical and hydrological studies conducted in coordination with Caltrans at the project level.

Bridges, Trestles, Culverts and Other Structures in Riparian Environments
Some project level activities may affect riparian flow patterns upstream of bridges, trestles, culverts or other structures for which Caltrans holds responsibility. Please ensure your project level environmental documents include hydrological studies to determine whether such impacts will occur, and to identify appropriate mitigation measures.

Habitat Restoration and Management
Project level activities related to habitat restoration and management should be done in coordination with local and regional Habitat Conservation Plans, and with Caltrans where our programs share stewardship responsibilities for habitats, species and/or migration routes.

Transportation Permit
Project work that requires movement of oversized or excessive load vehicles on State roadways requires a transportation permit that is issued by Caltrans. To apply, a completed transportation permit application with the determined specific route(s) for the shipper to follow from origin to destination must be submitted to: Caltrans Transportation Permits Office, 1823 14th Street, Sacramento, CA 95811-7119. See the following website for more information: www.dot.ca.gov/hq/traffops/permits.

Encroachment Permit
Please be advised that any ingress-egress, work (e.g., construction, vegetation management, drainage improvement, etc.), staging, storage, or traffic control that is conducted within or adjacent to or encroaches upon the State ROW requires an encroachment permit that is issued by Caltrans. A TMP or construction TIA will be required by Caltrans because of the construction related traffic restrictions and detours affect the STN. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process.

To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW as well as any applicable specifications, calculations, maps, etc. must be submitted to the following address: David Salladay, District Office Chief, Office of Permits, California Department of Transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. It is important to note that, in order to uphold the Caltrans statutory responsibility to protect the safety of the traveling public, if this information is not adequately provided, then a permit will not be issued for said encroachments. See the following website for more information: www.dot.ca.gov/hq/traffops/developserv/permits.

Should you have any questions regarding this letter, please contact Brian Ashurst at (510) 286-5505 or brian.ashurst@dot.ca.gov.

Sincerely,

Patricia

PATRICIA MAURICE
District Branch Chief
Local Development - Intergovernmental Review

c: Scott Morgan, State Clearinghouse – electronic copy
Tom Dumas, Metropolitan Planning Office Chief, Caltrans District 10 – electronic copy

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

1.4 California Department of Water Resources

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY **EDMUND G. BROWN JR.**, *Governor*

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

CC: H. Desai
D. Butler
L. Lopez

OCT 0 6 2017

Ms. Melih Ozbilgin, Senior Water Resources Specialist
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118-3614

SCH #2017082020, Initial Study and Notice of Preparation for Pacheco Reservoir Expansion Project
Santa Clara County

Dear Ms. Ozbilgin:

We have reviewed the Initial Study and Notice of Preparation for the above referenced project, which includes the construction of a new dam and removal of North Fork Dam, situated about ½-mile downstream.

Based on the information provided, the new dam will be under the jurisdiction of this Division for dam safety. North Fork Dam, No. 77, is currently under jurisdiction. Applications for construction of the new dam and the removal of North Fork Dam, together with plans, specifications, and the appropriate filing fees must be filed with the Division of Safety of Dams. All dam safety related issues must be resolved prior to approval of the applications, and the work must be performed under the direction of a Civil Engineer registered in California. Erik Malvick, our Acting Design Engineering Branch Chief, is responsible for the application process and can be reached at (916) 227-6742.

If you have any questions or require additional information, please contact Area Engineer Austin Roundtree at (916) 227-4625 or me at (916) 227-4631.

Sincerely,

ORIGINAL SIGNED BY

Andrew J. Mangney, Regional Engineer
Central Region
Field Engineering Branch
Division of Safety of Dams

cc: (See attached list.)

cc: Ms. Nadell Gayou, Engineer
Department of Water Resources
Division of Environmental Services
901 P Street, 2nd Floor
Sacramento, California 95814

Governor's Office of Planning and Research
State Clearinghouse
Post Office Box 3044
Sacramento, California 95812-3044

Ms. Katherine Oven, Deputy Operating Officer
Water Utility Capital Division
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

Mr. Frank O'Connell, President
Pacheco Pass Water District
Post Office Box 1382
Hollister, California 95023

1.5 Native American Heritage Commission

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Fax (916) 373-5471
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

Edmund G. Brown Jr., Governor

August 24, 2017

Melih Ozbilgin
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

RE: SCH#2017082020 Pacheco Reservoir Expansion project, Santa Clara County

Dear Melih:

The Native American Heritage Commission has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   a. A brief description of the project.
   b. The lead agency contact information.
   c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
   d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.
   c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
        i. Planning and construction to avoid the resources and protect the cultural and natural context.
        ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
        i. Protecting the cultural character and integrity of the resource.
        ii. Protecting the traditional use of the resource.
        iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have been already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

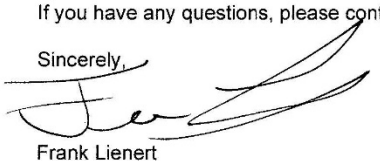
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
    a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
    b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
    a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
    b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
    c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions, please contact me at my email address: frank.lienert@nahc.ca.gov

Sincerely,



Frank Lienert
Associate Governmental Program Analyst

cc: State Clearinghouse

1.6 State Water Resources Control Board

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

SEP 2 0 2017

In Reply Refer to:
JH: 266.0

Melih Ozbilgin
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614

Dear Mr. Ozbilgin:

POTENTIAL UNAUTHORIZED DIVERSION OF WATER RELATED TO NOTICE OF PREPARATION FOR THE PACHECO RESERVOIR EXPANSION PROJECT (SCH No. 2017082020) IN SANTA CLARA COUNTY

Staff from the State Water Resources Control Board, Division of Water Rights (Division) has determined that the proposed project indicated above may divert water in such a manner that may require a water right approval. You should contact the Division to determine whether a water right permit or other water right approval is needed. Information on water rights and the permitting process is available at the Division's web site at:

http://www.waterboards.ca.gov/waterrights/

If a water right approval is needed, the State Water Board will act as a Responsible Agency for this project. Accordingly, the State Water Board may need to rely on the Lead Agency's California Environmental Quality Act (CEQA) document to support the Division's evaluation of the requested approval. The Lead Agency should therefore ensure that any CEQA document prepared for the project considers all potential direct and indirect environmental impacts associated with the diversion and use of water. Division staff would like the opportunity to provide preliminary comments on your administrative draft environmental document when it becomes available. Please include the Division in any mailings or notices related to the proposed project.

Unauthorized diversion and use of water is considered a trespass and subject to enforcement action under Water Code sections 1052 and 1831. Pursuant to Water Code section 1052, any diversion of water not covered by a valid basis of right may be subject to Administrative Civil Liability of up to $500 per day without further notice. The State Water Board also may issue a Cease and Desist Order in response to an unauthorized diversion or threatened unauthorized diversion pursuant to Water Code section 1831.

FELICIA MARCUS, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

1001 I Street, Sacramento, CA 95814 | Mailing Address: P.O. Box 100, Sacramento, CA 95812-0100 | www.waterboards.ca.gov

RECYCLED PAPER

SEP 2 0 2017

Melih Ozbilgin

- 2 -

Some diverters claim rights to divert independent of a permit, license, registration or certification issued by the State Water Board, such as diversions under riparian or pre-1914 rights. With limited exceptions, Water Code section 5101 requires that a Statement of Water Diversion and Use be filed for these diversions. Water Code section 5107 (c)(1) provides that the State Water Board may impose a civil liability of $1,000, plus $500 per day for each additional day on which the violation continues if the person fails to file a statement within 30 days after the board has called the violation to the attention of that person. These penalties are in addition to any penalties that may be imposed if the diverter does not hold a valid right or diverts in excess of what is authorized under that right. This letter serves as your notice of the statement requirement and potential penalty.

Please contact me at (916) 341-5759 or justine.herrig@waterboards.ca.gov if you have any questions or require additional information. Written correspondence or inquiries should be addressed as follows: State Water Resources Control Board, Division of Water Rights, and Attn: Justine Herrig, PO Box 2000, Sacramento, CA, 95812-2000.

Sincerely,

Justine Herrig

Justine Herrig, Environmental Scientist
Coastal Lahontan Permitting Unit
Division of Water Rights

Section 2. Tribes

2.1 Costanoan Rumsen Carmel Tribe

From: Tony Cerda
To: Pacheco Expansion
Cc: desireemunoz.dm92@gmail.com
Subject: Letter
Date: Wednesday, November 11, 2020 2:47:04 PM

Dear chris,

I Tony Cerda tribalchair of the Costanoan Rumsen Carmel tribe that i have received your letter and acknowledge your proposal. Let us know if you need anything else. My Granddaughter Desiree is CC'd if you need a quick response.

Shurur,
Tony Cerda

Section 3. Organizations and Individuals

3.1 California Native Plant Society

Santa Clara Valley Chapter
California Native Plant Society

March 12, 2021

Santa Clara Valley Water District
Attn: Todd Sexauer
5750 Almaden Expressway
San Jose, CA 95118
Email: PachecoExpansion@valleywater.org

Re: Pacheco Reservoir Expansion Project, Scoping Comments
(SCH Number 2017082020)

Dear Mr. Sexauer,

The California Native Plant Society, Santa Clara Valley Chapter (CNPS SCV) appreciates the opportunity to provide input on the proposed Pacheco Reservoir Expansion Project. CNPS is a non-profit environmental organization, established in 1965, whose mission is to protect California's native plant heritage and preserve it for future generations through the application of science, research, education, and conservation. The CNPS Santa Clara Valley Chapter has over 1,000 members distributed throughout our chapter area, which encompasses all of Santa Clara County and southern San Mateo County.

Valley Water proposes to greatly increase the size of the existing Pacheco Reservoir in southeastern Santa Clara County, north of SR 152. The project would rebuild the existing dam and increase the capacity of the reservoir from 5,500 acre feet to 140,000 acre feet. Water in the completed reservoir would extend for miles up the north fork of Pacheco Creek, and approximately 1,400 acres would be inundated by the project.

The Initial Study for the 2017 NOP identified sensitive vegetation types in the vicinity of the project, including serpentine chapparal and sycamore alluvial woodland. The 2017 NOP did not identify any special-status plant species in the vicinity of the project, however this may be because the property has not been generally open to the public, and has not been adequately surveyed during the appropriate season.

CNPS recommends that the Water District complete surveys for special-status plants prior to the issuance of the DEIR, so the impacts to these plants and any proposed mitigation measures can be adequately evaluated by resource agencies and the public. Surveys should be completed during the appropriate season, as identified in protocols identified by the applicable resource agencies or CNPS. The DEIR should describe the methods and protocols for rare plant surveys in areas identified for inundation and/or disturbance during construction. Mitigation measures to avoid and protect these plants during project construction and implementation should be clearly described in the DEIR. If

rare, threatened, and endangered plants are to be inundated following dam construction, detailed measures should be included in the DEIR describing all possible methods to reduce these impacts.

The DEIR should also clearly identify measures to control invasive species encroachment during and following project activities. Construction of new and expanded roads and other related infrastructure, such as pipelines, bridges, and tunnels, is likely to result in rapid incursion by invasive grasses and other weeds. The borrow pits and stockpile areas may also be likely areas vulnerable to the spread invasive plants. Extensive mitigation measures should be included in the DEIR to reduce the impact and spread of invasive plants, particularly during construction.

Thank you for the opportunity to provide comments on the Pacheco Reservoir Expansion Project. Please feel free to contact us with any questions.

Sincerely,

Linda R. Ruthruff

Linda Ruthruff, Conservation Chair
conservationchair@cnps-scv.org

California Native Plant Society
Santa Clara Valley Chapter
3921 E. Bayshore Road
Palo Alto, CA 94303

3.2 Center for Biological Diversity

October 11, 2017

Via Electronic Mail and USPS (w/attachments)

Mr. Melih Ozbilgin
Senior Water Resources Specialist
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118-3686
(408) 630-2725
mozbilgin@valleywater.org

RE: Comments on Notice of Preparation of an Environmental Impact Report for the Pacheco Reservoir Expansion Project

Dear Mr. Ozbilgin,

Please accept the following comments on the Notice of Preparation of an Environmental Impact Report ("NOP") for the Pacheco Reservoir Expansion Project ("Project") on behalf of the Center for Biological Diversity (the "Center"). The comments below refer to both the impacts of the Project itself, and to the impacts of the construction of the Project, from beginning to completion.

The Center is a non-profit environmental organization dedicated to the protection of native species and their habitats in the Western Hemisphere through science, policy, and environmental law. The Center has over one million members and on-line activists throughout California and the United States, including members within the Project vicinity.

The NOP states that the Santa Clara Valley Water District ("SCVWD") will prepare an Environmental Impact Report ("EIR") for the Pacheco Reservoir Expansion Project (proposed Project) in Santa Clara County, California. (NOP 1-3.) The proposed Project would result in significant impacts to ecologically valuable habitat and the biodiversity it supports. All phases of the Project, site preparation, dam removal and reconstruction, spillway and road construction, and operation will have dramatic impacts on the physical landscape and far-reaching hydrological effects. The EIR must identify potentially impacted species and ecological resources, analyze the effects on those populations, provide a thorough analysis of Project alternatives, and adopt all feasible mitigation measures.

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I. The EIR must disclose all of the Project's impacts on biological resources.

The proposed Project entails significant alterations to the streambed and riparian habitats that now exist within the Project site. These habitats are utilized by a number of special-status plant and wildlife species. It is critical that the EIR, before it can fully analyze the impacts of the Project, require exhaustive surveys the Project area to ascertain the presence of wildlife. CEQA requires that the lead agency use a proper "baseline." The baseline must be analyzed using *existing* physical conditions in the project area. (CEQA Guidelines § 15125(a) [existing physical conditions "normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant"].) Furthermore, a project's impacts should be compared to actual, existing pre-project conditions rather than to hypothetical conditions when determining the significance of a project's impacts. (*Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 322.) In providing the decision-maker with knowledge of the regional setting, "special emphasis should be placed on environmental resources that are rare or unique to the region and would be affected by the project." (CEQA Guidelines § 15125(c).)

The NOP speculates about the potential presence of species such as the California red-legged frog and western pond turtle, both special-status species. (NOP 2-11.) The EIR will not be able to adequately inform the decision-maker of impacts to wildlife if such effects are based on speculative population analysis. Seasonally appropriate surveys – including protocol-level surveys – must be conducted under the supervision of a resource agency such as the California Department of Fish and Wildlife (CDFW), and the results must be fully disclosed to the public in order to comply with CEQA.

It is critical that the EIR consider the Project's impacts to all species that might sustain impacts from the Project, not only special-status species. An EIR that is narrowly focused on minimizing impacts to only a few species runs the risk of driving other populations toward a point of decline where they too require special status protections. A comprehensive species survey of the areas impacted by the Project is a vital first step before any significance determination can be made or mitigation measures proposed.

The NOP downplays the effects of Project construction-related sedimentation because South Central California Coast steelhead (SCCC steelhead) do not regularly occur in Pacheco Creek. (NOP 2-13.) The impacts of increased turbidity from construction runoff could be significantly deleterious to any fish species present in effected areas. Turbid waters negatively impact fish species in a number of ways. Sedimentation decreases dissolved oxygen, making it more difficult for fish to breathe; while decreasing available food sources and increasing water temperatures.[1] Embryo and juvenile class of fish are particularly susceptible to the impacts of increased turbidity. (*Id.* at p. 2.) If steelhead are present in Pacheco Creek, it is likely in these lifestages as

[1] Flocculation of Construction Site Runoff in Oregon, available at http://www.deq.state.or.us/wq/stormwater/docs/nwr/flocculation.pdf.

the creek is upstream spawning habitat within the Pajaro watershed. (NOP 2-12.) The EIR must analyze which species are present downstream of Project construction, and assess the impacts of reduced water quality.

The EIR must also include a thorough analysis of fish species present above the new dam site. The NOP briefly references the negative impact that dewatering the reservoir will have on fish populations unable to seek safety in still-flowing creeks. (NOP 2-16.) The EIR should identify the species present in the reservoir, and assess the ability and likelihood of such species reaching safety. The impacts of dewatering the reservoir during construction can only be fully acknowledged in light of an accurate population survey and accounting of available alternative habitat.

II. The EIR must support the NOP's claimed beneficial impacts on fish and wildlife.

The NOP makes multiple claims that the Project could result in beneficial effects on species and habitats. (NOP 2-13, 2-15-17.) The NOP outlines a Project that will permanently inundate valuable terrestrial habitat while altering natural stream flow. (NOP 2-15.) The NOP cites multiple significant and potentially significant impacts on such habitats and the species present, yet ultimately determines the Project will be beneficial. (NOP 2-15.) The EIR must resolve such conflicting claims, and clearly explain how the Project would provide beneficial impacts to fish and wildlife.

The NOP overstates the beneficial impacts of the Project on SCCC steelhead habitat while downplaying the harm that will result from expansion of the reservoir. The NOP claims the impacts of dam construction, specifically the increased sedimentation and turbidity in Pacheco Creek, may not be significant because SCCC steelhead do not regularly occur in Pacheco Creek. (NOP 2-13.) In the preceding paragraph of the document, the NOP claims the Project will benefit the steelhead by improving flow and temperature conditions in the creek. (*Ibid.*) This claim assumes the presence of steelhead in order to bolster the potential benefit, without discussing the challenges of recruiting steelhead to a natal stream that has been damaged by Project-related sedimentation. Significant impacts to spawning and rearing habitat at critical life stages could damage steelhead survival, negating any potential benefits the stream may or may not experience later.

Most importantly, Pacheco Creek is designated as critical habitat for SCCC steelhead under the Endangered Species Act ("ESA"). (NOP 2-12.) The Ninth Circuit explained that the purpose of critical habitat designations is not merely to ensure the species' *survival*, but also to "carve out territory" that is "essential for the species' *recovery*." *Gifford Pinchot Task Force v. United States Fish & Wildlife Serv.* (9th Cir. 2004) 378 F.3d 1059, 1070. *Gifford Pinchot* concluded that the ESA views "conservation and survival as distinct, though complementary, goals, and the requirement to preserve critical habitat is designed to promote both conservation and survival." (*Id.*) To this end, steelhead presence in Pacheco Creek is not dispositive; the EIR must assess the

impacts of the Project on the critical habitat and the likelihood of recovery, and mitigate the effects in compliance with the ESA to provide for steelhead recovery.

In addition, while the NOP references a Recovery Plan for the SCCC steelhead (the "Recovery Plan") (NOP at 2-11), the NOP does not state whether expansion of the Pacheco Dam is envisioned by the Recovery Plan. The EIR must disclose whether such expansion is considered in the Recovery Plan as a benefit for the SCCC steelhead, or whether other actions are proposed instead. In reviewing the Recovery Plan, it does not appear to propose an expansion of the Pacheco Dam, but only generally states that critical recovery actions include developing and implementing "operating criteria to ensure the pattern and magnitude of groundwater extractions and water releases from … Pacheco Dam to provide the essential habitat functions to support the life history and habitat requirements of adult and juvenile steelhead."[2] However, the Recovery Plan does warn that "[t]he adverse effects of dam and surface water diversions are particularly significant because they impact steelhead by, blocking migration routes to spawning and rearing habitats, and altering natural flow regimes essential for maintaining these habitats." (*Id.*) Because the Recovery Plan acknowledges that dams generally impair steelhead habitat, it is unclear how the Project will benefit the SCCC steelhead. Indeed, the NOP suggests that the Project will result in the "take" of SCCC steelhead, such that a permit from National Marine Fisheries Service may be required. (NOP at 2-11 – 2-12.) Because CEQA requires that the EIR must inform the public of the impacts of the Project, including impacts of endangered or threatened species, the EIR needs to explain how the Project is either consistent or inconsistent with the Recovery Plan.

The EIR should analyze not only the quantity, but the quality of water released into Pacheco Creek and subsequent stream systems. The NOP touts the benefits to fish habitat of increased flow that will result from the Project. (NOP 2-13.) The quality of water entering the stream system via reservoir releases is different to water that would enter through natural watershed processes. Dams alter the natural flow of sediment and nutrients that would otherwise pass through a stream system. As such organic matter sits behind a dam; it can induce harmful algae blooms, leading to oxygen-starved water ultimately being released downstream. [3] The EIR must assess the impact to watershed processes from the seven-fold increase in reservoir capacity.

III. The EIR must analyze project alternatives that do not include reservoir expansion.

The EIR should consider a range of alternatives that benefit water supply without necessitating reservoir expansion. An EIR must analyze reasonable alternatives that would achieve most of the basic objectives while avoiding or lessening significant environmental effects. (CEQA

[2] South-Central California Steelhead Recovery Plan (2013), available at http://www.westcoast.fisheries.noaa.gov/publications/recovery_planning/salmon_steelhead/domains/south_central_southern_california/2013_sccs_recoveryplan_final.pdf.
[3] *The Downside of Dams: Is the Environmental Price of Hydroelectric Power Too High?* Scientific American, available at https://www.scientificamerican.com/article/how-do-dams-hurt-rivers/.

Guidelines § 15126.6(a).) The EIR should analyze a wide range of alternatives. As courts have made clear, "[a] potential alternative should not be excluded from consideration merely because it would impede to some degree the attainment of the project objectives, or would be more costly." (*Save Round Valley Alliance v. County of Inyo* (2007) 157 Cal. App. 4th 1437, 1456-57.) There are a number of strategies that can be employed to improve California's water supply that are more cost-effective, and less harmful to the environment than building dams. The NOP lists Project goals concerning improving ecological and economic uses through increased water supply and quality. (NOP 1-1.) The EIR should provide a thorough comparative analysis of alternate methods for achieving beneficial increases in water supply, such as agricultural and municipal efficiency, water reuse, and stormwater capture.[4] Such alternative methods are far less costly, both economically and environmentally, than the proposed reservoir expansion.

The Project presumes the answer to California water supply challenges lies in increased storage capacity, ignoring demand-side solutions. The NOP describes a number of feasibility studies, spanning 25 years, which look at alternative reservoir sites and sizes. (NOP 1-2.) The protracted planning process is illustrative of the difficulty and expense of dam construction, as well as a stubborn commitment by SCVWD to an ill-suited "solution." The costs of the proposed reservoir expansion also include the opportunity costs of agency fixation on dam research and construction, rather than studying environmentally less harmful methods to improve supply. The time and resources already sunk into this Project's conception must not dissuade the responsible agencies and decision-makers from considering alternative paths to the stated goal of improved water supply. SCVWD has already invested resources in groundwater recharge as a means to increase storage.[5] SCVWD should explore the possibilities of expanding existing groundwater storage as part of an alternative solution to dam construction.

California faces challenges to its water system that were not cognizable when the studies for this Project began in 1993. The NOP outlines a lineage of research focused on dam construction. (NOP 1-2.) The bureaucratic inertia of repeated reservoir feasibility studies should not bear on the decision to go forward with the proposed Project. SCVWD must consider the growing body of information and technology that supports environmentally beneficial strategies to bolster water supply through improved efficiency and demand reduction.

The NOP claims the proposed Project will benefit fish and wildlife in the San Joaquin River Watershed by providing up to 2,000 acre feet (AF) to wildlife refuges in the San Joaquin River Basin. (NOP 2-13.) SCVWD should consider alternatives that do not sacrifice ecosystem health within its jurisdiction for the benefit of water uses in distant jurisdictions. Providing water for San Joaquin wildlife refuges is an important goal, but it is best achieved by its local agencies implementing the same supply enhancing techniques recommended to SCVWD here. The 2014

[4] *The Untapped Potential of California's Water Supply: Efficiency, Reuse, and Stormwater*, NRDC, available at https://www.nrdc.org/sites/default/files/ca-water-supply-solutions-capstone-IB.pdf.
[5] 2012 Water Supply and infrastructure Master Plan, SCVWD, available at http://www.valleywater.org/EkContent.aspx?id=111&terms=ground+water+rechargep, (NRDC Report).

NRDC report, cited above, found that water supply potential from agricultural efficiency for the San Joaquin River hydrologic region was at least 1.3 million AF per year. (NRDC Report at p. 5.) The EIR should consider alternatives to building more dams, particularly when the potential benefits of efficiency-based supply improvements dwarf the claimed benefits of reservoir expansion.

The EIR should assess SCVWD's potential to save water by funding or implementing programs to repair the county's conveyance infrastructure. The SCVWD website provides instructions to residential, agricultural and commercial water users regarding efficiency practices. The SCVWD fails to mention potential efficiency gained by implementing a program to monitor and repair damaged pipes, leaks that probably lose 10% of the water conveyed.[6] SCVWD estimates that Santa Clara County will use 299,000 AF in calendar year 2017.[7] It does not appear SCVWD is monitoring the potential 30,000 AF its pipes leak each year. Such a yearly loss compounds the opportunity costs of the SCVWD's fixation with reservoir expansion as the solution to water supply challenges. The relatively small increase in storage capacity this Project would provide would not be necessary if agencies like SCVWD considered readily available alternative methods to achieve a sustainable water supply.

IV. The EIR must consider the cumulative impacts of other reservoir projects.

The EIR must view the impacts of this Project in the context of statewide water supply challenges and the environmental threat of increased reservoir construction. The alternatives analysis above promotes a policy shift away from increasing storage capacity in dams and toward efficient use and demand reduction. The recent drought has highlighted the immense challenges facing California's ability to sustain its water needs into the future. The proposed Pacheco Reservoir Expansion is another step in an unsustainable direction, both economically and environmentally. Approval of this Project would represent validation of the old-style approach to water resource management that has thus far failed to provide California with a sustainable path forward. Each new dam Project in California threatens fish and wildlife by destroying already limited habitat. The cumulative impacts of such Projects must be addressed by each new proposal. The Pacheco Project EIR should seize the opportunity to consider the range of cost-effective, environmentally sound strategies that offer sustainable water management while preventing further ecological damage.

[6] *California Water Agencies Don't Know How Much Their Pipes Leak*, available at http://newsroom.ucla.edu/releases/california-water-agencies-dont-know-how-much-their-pipes-leak-ucla-report-finds.
[7] Total Water Used, SCVWD, available at www.valleywater.org

V. The EIR must consider the impacts of special-status amphibian and reptile species.

The Project has a potential to impact several special-status amphibian and reptile species, including the California red-legged frog, the California tiger salamander, the foothill yellow-legged frog, and the western pond turtle. All of these species rely on the use of multiple habitat types to survive and reproduce, including rivers and streams, wetlands, and terrestrial habitat. Despite their small size, these species utilize large amounts of habitat and traverse long distances. Impacts to any of these habitats can impact these species, thus it is important to consider a broad range of habitat impacts from the proposed project, including areas between suitable habitats to allow them to migrate and disperse. The expansion of this reservoir is expected to result in the direct loss of habitat

The California red-legged frog and California tiger salamander are protected as threatened species under the Endangered Species Act, and thus all precautions must be taken to not impact these species and cause them to become further imperiled. The western pond turtle is a California Species of Special Concern and is currently under consideration for protection under the Endangered Species Act. The Initial Study claims that these species will gain benefits from additional water being available to wildlife refuges in the San Joaquin River Watershed (Initial Study and NOP 2-14). However, the priority for recovery for these species should be to protect as much of their native habitats as possible. Destroying or otherwise altering these species' habitats in one place to gain marginal improvements to their habitat in another place is not a scientifically or logically justifiable way to conserve and restore rare species. There is no possibility that this will result in a net benefit for these species.

The foothill yellow-legged frog ("FYLF") is currently a candidate species under the California Endangered Species Act ("CESA"). Under CESA, candidate species receive all the protections of a state listed species for a year while the commission decides whether to provide permanent endangered species protections. A final decision on the frog's CESA status is expected in Summer 2018. In addition, the FYLF is currently under consideration for protection under the federal Endangered Species Act, with a decision expected in 2020.

Dams and water diversions are among the top threats to the FYLF. Extirpation of FYLF populations has occurred more frequently downstream of dams than in free-flowing systems and extirpation is positively correlated with the height of upstream dams (Lind 2005; Kupferberg et al. 2012). Dams and reservoir operations suppress winter peak discharges and thus allow woody riparian vegetation to encroach into the active channel. The roots stabilize the cobble and gravel bar features where frogs congregate in groups (called leks) to find mates and to lay eggs. In regulated rivers, vegetation encroachment often eliminates the suitability of these bars for breeding via shading and/or changing bar shape and bank slope.

The diminution of winter flooding and conversion of ephemeral water bodies to permanent ones also promotes populations of non-native taxa such as bullfrogs, crayfish, and bass in managed river systems (Fuller et al. 2011). Bullfrogs and crayfish negatively affect amphibian populations in general (Kats and Ferrer 2003) and are implicated in declines of foothill yellow-legged frogs specifically (Moyle 1973; Hayes and Jennings 1986; Kupferberg 1997a). Ill-timed water releases through dams have the potential to create lethal velocities for early life stages and cold hypolimnetic releases shift water temperatures below the thermal tolerances for tadpoles (Catenazzi and Kupferberg 2013).

Generally, activities that disrupt the natural flow and sediment transport regime of rivers, including timing of flows, water depths, velocities, or water temperature can affect foothill yellow-legged frogs (Lind 2005; Yarnell et al. 2010; Kupferberg et al. 2012). Direct and indirect impacts associated with changes to instream flows include: desiccation or stranding of eggs or tadpoles due to rapid reductions in flow, delays in breeding and embryo or tadpole development due to cold water temperatures (Wheeler et al. 2015), declines in algal productivity and shifts in species composition of periphyton (Catenazzi and Kupferberg 2013; Furey et al. 2014), reduced resources for tadpoles, and reduced insect abundance and food-web repercussions. If sufficiently high, reservoir management releases and flow releases to benefit salmonids during the spring of otherwise dry years could dislodge egg masses and displace larvae downstream (Railsback et al. 2016).

VI. The EIR should not characterize the Project as merely an "expansion" of an existing reservoir.

While the Project is characterized as an "expansion," the proposed capacity of the new reservoir is 141,600 acre feet, which is over ***25*** times the size of the existing 5,500 AF reservoir. Characterizing such a project as an "expansion" – even though it involves the construction of a *new* dam and reservoir – improperly downplays the environmental impacts of the Project.

Sincerely,

J.P. Rose
Staff Attorney
Center for Biological Diversity
660 S. Figueroa Street, Suite 1000
Los Angeles, CA 90017
Ph: (213) 785-5406
jrose@biologicaldiversity.org

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3.3 Santa Clara Valley Audubon Society 1

From: Melih Ozbilgin
Sent: Thursday, September 07, 2017 2:43 PM
To: shani kleinhaus
Cc: Mike Ferreira; Jerry De La Piedra; Katja Irvin; Tiffany Hernandez
Subject: RE: Pacheco Reservoir NOP

Good afternoon Shani,

Yes, of course we will add you to the stakeholder list. Thank you for your interest.

Melih

From: Shani Kleinhaus [mailto:shanibirds@gmail.com] **On Behalf Of** shani kleinhaus
Sent: Tuesday, September 05, 2017 6:48 PM
To: Katja Irvin <katja.irvin@sbcglobal.net>
Cc: Melih Ozbilgin <MOzbilgin@valleywater.org>; Mike Ferreira <michaeljferreira@gmail.com>; Jerry De La Piedra <GDeLaPiedra@valleywater.org>
Subject: Re: Pacheco Reservoir NOP

Hello Melih,
Following Katja's lead - would you oplease add me to the notification list?
Thank you,
Shani

Shani Kleinhaus, Ph.D.
Environmental Advocate
Santa Clara Valley Audubon Society
22221 McClellan Rd. Cupertino 95014
Tel. (650) 868 2114
shani@scvas.org

On 5 Sep 2017, at 16:28, Katja Irvin <katja.irvin@sbcglobal.net> wrote:

Melih,

I consider the call from Jerry to be an informal notification, similar to when he notified me of the NOP.

I would still ask for more formal notification to the Sierra Club and other stakeholders (Committee for Green Foothills, Gilroy Growing Smarther, San Benito Rising, etc.) including the date for a scoping meeting. I also hope the District will develop a better protocol for such notification in the future.

I requested a list of stakeholders initially notified about the NOP. I would still like to see that.

Thank you for your consideration,

Katja

From: Melih Ozbilgin [mailto:MOzbilgin@valleywater.org]
Sent: Tuesday, September 5, 2017 8:56 AM
To: Katja Irvin <katja.irvin@sbcglobal.net>
Cc: 'Shani Kleinhaus' <shani@scvas.org>; 'Mike Ferreira' <michaeljferreira@gmail.com>; Jerry De La Piedra <GDeLaPiedra@valleywater.org>
Subject: RE: Pacheco Reservoir NOP

Sorry Katja. Just got back to work from vacation. I gather Jerry was able to address your concern. In the meantime, if you need anything else, please do not hesitate to contact me or Jerry.

Best regards,
Melih

From: Katja Irvin [mailto:katja.irvin@sbcglobal.net]
Sent: Sunday, September 03, 2017 6:29 PM
To: Melih Ozbilgin <MOzbilgin@valleywater.org>
Cc: 'Shani Kleinhaus' <shani@scvas.org>; 'Mike Ferreira' <michaeljferreira@gmail.com>; Jerry De La Piedra <GDeLaPiedra@valleywater.org>
Subject: FW: Pacheco Reservoir NOP

Dear Melih,

Since I didn't hear from you, I contacted Jerry De La Piedra to ask for assistance in extending this comment period. He called me Friday afternoon to say that the deadline would be extended. Thank you Jerry!

Please send us a confirmation of this extension and any other relevant information.

Thank you,

Katja Irvin

From: Katja Irvin [mailto:katja.irvin@sbcglobal.net]
Sent: Thursday, August 31, 2017 6:30 PM
To: Jerry De La Piedra <gdelapiedra@valleywater.org>
Cc: Debra Caldon <dcaldon@valleywater.org>
Subject: Fw: Pacheco Reservoir NOP

Jerry and Debra,

I requested to Melih for a scoping meeting for this NOP and a 30-day extension. See details below. I have not received a response since she is on vacation.

According to the notice the scoping period will end on Sunday. Please advise.

Thank you for your assistance,

Katja Irvin, AICP
Water Committee Chair

Sierra Club Loma Prieta Chapter

----- Forwarded Message -----
From: Katja Irvin <katja.irvin@sbcglobal.net>
To: Melih Ozbilgin <MOzbilgin@valleywater.org>
Sent: Friday, August 25, 2017 10:43 AM
Subject: Re: Pacheco Reservoir NOP

Hello Melih,

Thank you for your response. Given the issues pointed out below and the fact you are on vacation, this is an official request for the scoping comment period be extended by 30 days.

Thank you,
Katja

From: Melih Ozbilgin <MOzbilgin@valleywater.org>
To: Katja Irvin <katja.irvin@sbcglobal.net>
Sent: Friday, August 25, 2017 12:48 AM
Subject: Re: Pacheco Reservoir NOP

Katja,
I am on vacation for two weeks. Got your email on my iPhone but don't have access to my files. I will get you the information you requested as soon as I get back.
We are committed to serving the public; we especially want to work with your organization.
Looking forward to meeting you in person.
Melih

On Aug 24, 2017, at 5:05 PM, Katja Irvin <katja.irvin@sbcglobal.net<mailto:katja.irvin@sbcglobal.net>> wrote:

Hi Melih,

Can you send me a list of the stakeholders who have been officially notified about this NOP? I found out about it through informal communication from District staff but the Sierra Club has not received any official notification.

Also, I could not find any information about a scoping hearing. This seems very necessary for a project of this magnitude. Please inform me of the date as soon as possible.

Thank you for your commitment to serving the public,

Katja Irvin, AICP
Water Committee Chair
Sierra Club Loma Prieta Chapter

3.4 Santa Clara Valley Audubon Society 2

Santa Clara Valley
Audubon Society
Established 1926

October 10th, 2017 *Via email*

Melih Ozbilgin
Senior Water Resources Specialist
Santa Clara Valley Water District
5750 Almaden Expressway San Jose, California 95118
mozbilgin@valleywater.org

Re: Scoping Comments on the Initial Study and Notice of Preparation (NOP) for Santa Clara Valley Water District's (SCVWD) Pacheco Reservoir Expansion Project (Project).

Dear Ms. Ozbilgin,

The Santa Clara Valley Audubon Society (SCVAS) thanks you for the opportunity to provide scoping comments on the NOP/IS for the Pacheco Reservoir Expansion Project. SCVAS has been a strong advocate for wildlife and habitats since our founding in 1926. Our mission is to promote the enjoyment, understanding, and protection of birds and other wildlife by engaging people of all ages in birding, education, and conservation.
Here are our questions, requests, and comments:

1. Please provide a detailed and comprehensive account of all water rights and allocations from the existing Pacheco Dam that will be carried forward if the new Dam is built. Please describe all new water rights allocations.

2. An EIR is meant to inform the public. Please describe the issue of "low point issue in San Luis Reservoir" (mentioned in Project Description, Page 1-2, NOP) and explain how it is related to the Project.

3. Section 1.5.1 provides, "As part of the Project, SCVWD will transfer 2,000 AF of its CVP water contract (in below normal water years), directly or through transfer and exchanges, in perpetuity to Reclamation and USFWS' Refuge Water Supply Program (RWSP), for use in the Incremental Level 4 water supply pool for wildlife refuges."
    - Please explain what "Incremental Level 4 water supply pool" entails?
    - Can SCVWD provide guarantees that the 2,000 AF will be available to USFWS Refuges, and will not be directed to other uses?
    - How much water (in AF) will provide the baseline needs of RWSP? How significant (in %) is the allocation of 2,000 AF?
    - Please revise the condition to allocate water to RWSP every year, not only in "*below normal water*" years. This should help provide refuges into the future as population increases, water demands increase, and the climate changes.

- Section 1.6 Project Benefits provides *"…Increased storage capacity provided by the Project would allow SCVWD to provide* ***up to*** *2,000 acre-feet of water to wildlife refuges in the San Joaquin River watershed…"*(emphasis added). Please explain in detail the circumstances that will result in the supply of **less than** 2,000 acre-feet of water to wildlife refuges in the San Joaquin River watershed.

4. Please rank the prioritization of water allocation to users (who gets the water first, and how much) during wet years and drought years, especially during prolonged drought years.

5. Section 1.6, Project Benefits, shows no direct benefits to San Benito County.
   - Are there benefits to San Benito County agriculture?
   - Please consider https://benitolink.com/news/sups-seek-avert-liability-repairing-levees-reform-defunct-property-owner-supported-water - please explain how this project may relate to repair, maintenance and upkeep of flood-protection and water supply infrastructure owned by the Pacheco Water District, including levees in San Benito County?

6. Section 2.4.2 Agricultural and Forestry Resources shows a potential impact due to inundation of Oak Woodland.
   - This impact should also be evaluated as a Biological Resource impact, and consider and mitigate impact to Oak Woodland resources in Santa Clara County. Please review and consider:
     i. https://www.sccgov.org/sites/dpd/DocsForms/Documents/CEQA_OaksPlan.pdf
     ii. https://www.sccgov.org/sites/dpd/DocsForms/Documents/Oakwoodlands_Guide.pdf
     iii. http://resilientsv.sfei.org/sites/default/files/Re-Oaking%20Silicon%20Valley_SFEI_June2017_highres.pdf
   - Please explain what is meant by, *"… the Project has the potential to diminish agricultural land resource quality and importance* ***because of altered and/or soil saturation****"* (emphasis added). Please analyze project impacts to farms and agriculture in San Benito County, and include detailed maps for areas of potential impacts.

7. Section 2.4.4 Biological Resources describes mitigation for Special-status wildlife (at 2-11) stating, "*Impacts on individuals or habitat for special-status wildlife would require incidental take authorization* " and *"Coverage for terrestrial species may also be obtained through the Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan (VHP). The Project is not a covered activity in the VHP; however, it could be added through a special major amendment procedure and conservation strategy for terrestrial covered species"*. Alternatively, project-specific consultation process with the wildlife agencies will take place. The Scoping Document finds, "*If the VHP is amended to include expansion of Pacheco Reservoir, the proposed Project will comply with the conditions of the VHP. If the VHP is not amended to include the proposed Project, federal Endangered Species Act and California Endangered Species Act consultation and compliance would be addressed through a separate mechanism and would not impact the existing HCP.* ***Therefore, the proposed Project would not conflict with the VHP or any other adopted HCPs or NCCPs…" (***emphasis added).

We strongly disagree with the finding that the Project will not have significant conflicts with the VHP, for the following reasons:

- Please discuss the process for a "special major amendment procedure" for the VHP. In our experience, a special major amendment is an extremely lengthy and costly process. Such process is likely to engage not only the CDFW, USFWS and six current partner agencies, but also many additional stakeholders from both Santa Clara and San Benito Counties. Thus, a future "special major amendment procedure" cannot be guaranteed and in our opinion, is extremely unlikely to come to fruition. Please do not rely on permitting through the VHP for this project.

- In the unlikely scenario that the project will be processed through a special major amendment to the VHP, it will require the VHP to add significant acreage of mitigation land to accomplish its Conservation Goals and Objectives for all habitat types and covered species. This will impede and delay the ability of the VHP to effectively implement its existing conservation strategy in the foreseeable future.

- Given that the Project's land could alternatively be used by the habitat plan to achieve its conservation goals, please explain how the VHP may achieve the NCCP goal of enhancing natural communities if this site is not available for preservation.
  Please identify similar properties that the VHP can feasibly acquire to mitigate for the take of the VHP-covered species on the project site and the loss of habitat and biological resources to project construction and the inundation of over 1,300 acres of oak woodland, wetlands, riparian forest and other sensitive biotic communities.

- If the Project is considered through a federal Endangered Species Act and California Endangered Species Act consultation (section 7), the project could compete with the VHP for suitable mitigation land needed to accomplish the VHP's Conservation Goals and Objectives for habitat types and covered species.

The EIR should evaluate potential conflicts with the VHP, including potential competition for land, and the loss of potential mitigation on site. The EIR should also analyze potential conflicts with the Conservation Strategy for each covered wildlife species and each habitat type.

8. Section 2.4.4 Biological Resources: Surveys are needed for agencies and for the public to fully understand the potential impacts to all listed plant and wildlife species (including Species of Special Concern, threatened and endangered species) that could occur on the Project site.

- The Scoping document states, "There are no known occurrences of special-status plants in the vicinity of the Project". Since the property has been in private hands for decades, it is not surprising that endangered plant species have not been observed there. Please survey for endangered plants species. Please conduct the surveys during the seasons that the plants are identifiable.
- Please provide surveys for American Badger

- Please provide surveys for the following bird species:
  - Least Bell's Vireo
  - Southwest Willow Flycatcher
  - Please survey for Golden eagle nesting sites
  - Tri-colored Blackbird nesting colonies
- Please review the species of climate threatened and endangered bird species here: http://ca.audubon.org/conservation/californias-climate-threatened-and-endangered-birds and analyze impacts to birds at risk.
- Please provide survey for all three listed amphibian species: California tiger salamander, yellow- and red- legged frog.

9. Please disclose what types of recreation (boating, fishing, swimming…) will be permitted, and fully analyze potential direct and indirect impacts.

10. Exotic and invasive aquatic organisms may arrive at Pacheco reservoir with imported water and with recreation vehicles. Please analyze impacts of potential introduction of exotic and invasive aquatic organisms into Pacheco watershed and Monterey Bay.

11. Section 2.4.13 Population and Housing proposes that the project will not induce growth. We disagree. Additional water availability and reliability in Santa Clara County is very likely to translate into growth in the County.

We thank you for the opportunity to provide these comments. Please do not hesitate to contact us if you have questions, and please keep us on the notification list for any additional opportunities for the public to engage in the evaluation and permitting processes.

Thank you,

Shani Kleinhaus, Ph.D.
Environmental Advocate
Santa Clara Valley Audubon Society
22221 McClellan Rd., Cupertino 95014

3.5 Sierra Club Loma Prieta 1

From: Katja Irvin <katja.irvin@sbcglobal.net>
Date: September 3, 2017 at 6:29:11 PM PDT
To: <mozbilgin@valleywater.org>
Cc: 'Shani Kleinhaus' <shani@scvas.org>, 'Mike Ferreira' <michaeljferreira@gmail.com>, 'Jerry De La Piedra' <GDeLaPiedra@valleywater.org>
Subject: FW: Pacheco Reservoir NOP

Dear Melih,

Since I didn't hear from you, I contacted Jerry De La Piedra to ask for assistance in extending this comment period. He called me Friday afternoon to say that the deadline would be extended. Thank you Jerry!

Please send us a confirmation of this extension and any other relevant information.

Thank you,

Katja Irvin

From: Katja Irvin [mailto:katja.irvin@sbcglobal.net]
Sent: Thursday, August 31, 2017 6:30 PM
To: Jerry De La Piedra <gdelapiedra@valleywater.org>
Cc: Debra Caldon <dcaldon@valleywater.org>
Subject: Fw: Pacheco Reservoir NOP

Jerry and Debra,

I requested to Melih for a scoping meeting for this NOP and a 30-day extension. See details below. I have not received a response since she is on vacation.

According to the notice the scoping period will end on Sunday. Please advise.

Thank you for your assistance,

Katja Irvin, AICP
Water Committee Chair

Sierra Club Loma Prieta Chapter

----- Forwarded Message -----
From: Katja Irvin <katja.irvin@sbcglobal.net>
To: Melih Ozbilgin <MOzbilgin@valleywater.org>
Sent: Friday, August 25, 2017 10:43 AM
Subject: Re: Pacheco Reservoir NOP

Hello Melih,

Thank you for your response. Given the issues pointed out below and the fact you are on vacation, this is an official request for the scoping comment period be extended by 30 days.

Thank you,
Katja

From: Melih Ozbilgin <MOzbilgin@valleywater.org>
To: Katja Irvin <katja.irvin@sbcglobal.net>
Sent: Friday, August 25, 2017 12:48 AM
Subject: Re: Pacheco Reservoir NOP

Katja,
I am on vacation for two weeks. Got your email on my iPhone but don't have access to my files. I will get you the information you requested as soon as I get back.
We are committed to serving the public; we especially want to work with your organization.
Looking forward to meeting you in person.
Melih

On Aug 24, 2017, at 5:05 PM, Katja Irvin <katja.irvin@sbcglobal.net<mailto:katja.irvin@sbcglobal.net>> wrote:

Hi Melih,

Can you send me a list of the stakeholders who have been officially notified about this NOP? I found out about it through informal communication from District staff but the Sierra Club has not received any official notification.

Also, I could not find any information about a scoping hearing. This seems very necessary for a project of this magnitude. Please inform me of the date as soon as possible.

Thank you for your commitment to serving the public,

Katja Irvin, AICP
Water Committee Chair
Sierra Club Loma Prieta Chapter

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Pacheco Reservoir Expansion Project

Lead Agency: Santa Clara Valley Water District
Contact Person: Melih Ozbilgin
Mailing Address: 5750 Almaden Expressway
Phone: (408) 630-2725
City: San Jose
Zip: 95118-3686
County: Santa Clara

Project Location: County: Santa Clara
City/Nearest Community: Gilroy
Cross Streets: State Route 152 and El Toro Road
Zip Code: 95023
Longitude/Latitude (degrees, minutes and seconds): 121 ° 17 ′ 32 ″ N / 37 ° 3 ′ 25 ″ W Total Acres:
Assessor's Parcel No.: Multiple
Section: n/a
Twp.: n/a
Range: n/a
Base: n/a
Within 2 Miles: State Hwy #: 152
Waterways: Pacheco Creek, Pajaro River
Airports:
Railways:
Schools:

Document Type:

CEQA: ☒ NOP ☐ Early Cons ☐ Neg Dec ☐ Mit Neg Dec ☐ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.) ☐ Other:
NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI
Other: ☐ Joint Document ☐ Final Document ☐ Other:

Local Action Type:

☐ General Plan Update ☐ General Plan Amendment ☐ General Plan Element ☐ Community Plan
☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ☐ Site Plan
☐ Rezone ☐ Prezone ☐ Use Permit ☐ Land Division (Subdivision, etc.)
☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☐ Other:

Development Type:

☐ Residential: Units Acres
☐ Office: Sq.ft. Acres Employees
☐ Commercial: Sq.ft. Acres Employees
☐ Industrial: Sq.ft. Acres Employees
☐ Educational:
☐ Recreational:
☒ Water Facilities: Type Reservoir Expansi MGD
☐ Transportation: Type
☐ Mining: Mineral
☐ Power: Type MW
☐ Waste Treatment: Type MGD
☐ Hazardous Waste: Type
☐ Other:

Project Issues Discussed in Document:

☒ Aesthetic/Visual ☒ Agricultural Land ☒ Air Quality ☒ Archeological/Historical ☒ Biological Resources ☐ Coastal Zone ☐ Drainage/Absorption ☐ Economic/Jobs
☐ Fiscal ☒ Flood Plain/Flooding ☒ Forest Land/Fire Hazard ☒ Geologic/Seismic ☒ Minerals ☒ Noise ☒ Population/Housing Balance ☒ Public Services/Facilities
☒ Recreation/Parks ☒ Schools/Universities ☐ Septic Systems ☐ Sewer Capacity ☒ Soil Erosion/Compaction/Grading ☒ Solid Waste ☒ Toxic/Hazardous ☒ Traffic/Circulation
☒ Vegetation ☒ Water Quality ☒ Water Supply/Groundwater ☒ Wetland/Riparian ☒ Growth Inducement ☒ Land Use ☐ Cumulative Effects ☐ Other:

Present Land Use/Zoning/General Plan Designation:

Land zoning designations for the parcels are agricultural ranchlands. Surrounding land uses include grazing, water storage and

Project Description: *(please use a separate page if necessary)*

The Pacheco Reservoir Expansion Project includes construction and operation of a new dam and reservoir, pump station, conveyance facilities, and related miscellaneous infrastructure (e.g., access roads). The new dam and reservoir would be constructed on Pacheco Creek 0.5 mile upstream from the existing North Fork Dam, and would inundate most of the existing Pacheco Reservoir. The proposed total storage for the new reservoir is 141,600 acre-feet, with an active storage of 140,800 acre-feet. Water will be collected in the new reservoir during the winter months from runoff from the local watershed area, and diversion of Central Valley Project supplies from Pacheco Pipeline, when needed.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

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Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

X	Air Resources Board	X	Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Emergency Management Agency	X	Parks & Recreation, Department of
	California Highway Patrol		Pesticide Regulation, Department of
X	Caltrans District #4	X	Public Utilities Commission
	Caltrans Division of Aeronautics	X	Regional WQCB #3
	Caltrans Planning	X	Resources Agency
	Central Valley Flood Protection Board		Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy		S.F. Bay Conservation & Development Comm.
	Coastal Commission		San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
X	Conservation, Department of		Santa Monica Mtns. Conservancy
	Corrections, Department of	X	State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
	Education, Department of	X	SWRCB: Water Quality
	Energy Commission	X	SWRCB: Water Rights
X	Fish & Game Region #3 & 4		Tahoe Regional Planning Agency
X	Food & Agriculture, Department of		Toxic Substances Control, Department of
X	Forestry and Fire Protection, Department of	X	Water Resources, Department of
	General Services, Department of		
	Health Services, Department of		Other:
	Housing & Community Development		Other:
X	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date 08/11/17 Ending Date 09/11/17

Lead Agency (Complete if applicable):

Consulting Firm: Stantec
Address: 3301 C Street, Suite 1900
City/State/Zip: Sacramento, CA 95817
Contact: Mary Paasch
Phone: 916-418-8414

Applicant: Santa Clara Valley Water District
Address: 5750 Almaden Expressway
City/State/Zip: San Jose, CA 95118-3686
Phone: (408) 630-2725

Signature of Lead Agency Representative: _____ **Date:** 8/4/2017

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Revised 2010

3.6 Sierra Club Loma Prieta 2

From: Melih Ozbilgin
Sent: Thursday, September 07, 2017 2:41 PM
To: Katja Irvin
Cc: 'Shani Kleinhaus'; 'Mike Ferreira'; Jerry De La Piedra; Garth Hall
Subject: RE: Pacheco Reservoir NOP
Attachments: NOC Signed.pdf

Katja,
Thank you for continued interest in participating in our project and suggestions for additional stakeholders. As I have indicated before, we take comments to our efforts very seriously and act on them. Please do not take our late response as anything negative; we have been extremely busy.

Attached is the stakeholders NOP was sent to. In addition, we have posted a notice on our website. We have notified the state clearinghouse that we wish to extend the comment period an additional 30 days and waiting to hear back. In the mean time the District's web page is updated to reflect the extension. Also, we do not have a date for a scoping meeting yet but when we do, Sierra Club and other stakeholders will be invited with plenty notice.

Jerry is out of the office until September 18th. When he returns, we will reach out to you to set up an in-person meeting to address your concerns.

Best regards,
Melih

From: Katja Irvin [mailto:katja.irvin@sbcglobal.net]
Sent: Tuesday, September 05, 2017 4:29 PM
To: Melih Ozbilgin <MOzbilgin@valleywater.org>
Cc: 'Shani Kleinhaus' <shani@scvas.org>; 'Mike Ferreira' <michaeljferreira@gmail.com>; Jerry De La Piedra <GDeLaPiedra@valleywater.org>
Subject: RE: Pacheco Reservoir NOP

Melih,

I consider the call from Jerry to be an informal notification, similar to when he notified me of the NOP.

I would still ask for more formal notification to the Sierra Club and other stakeholders (Committee for Green Foothills, Gilroy Growing Smarther, San Benito Rising, etc.) including the date for a scoping meeting. I also hope the District will develop a better protocol for such notification in the future.

I requested a list of stakeholders initially notified about the NOP. I would still like to see that.

Thank you for your consideration,
Katja

From: Melih Ozbilgin [mailto:MOzbilgin@valleywater.org]
Sent: Tuesday, September 5, 2017 8:56 AM
To: Katja Irvin <katja.irvin@sbcglobal.net>
Cc: 'Shani Kleinhaus' <shani@scvas.org>; 'Mike Ferreira' <michaeljferreira@gmail.com>; Jerry De La Piedra

<GDeLaPiedra@valleywater.org>
Subject: RE: Pacheco Reservoir NOP

Sorry Katja. Just got back to work from vacation. I gather Jerry was able to address your concern. In the meantime, if you need anything else, please do not hesitate to contact me or Jerry.

Best regards,
Melih

From: Katja Irvin [mailto:katja.irvin@sbcglobal.net]
Sent: Sunday, September 03, 2017 6:29 PM
To: Melih Ozbilgin <MOzbilgin@valleywater.org>
Cc: 'Shani Kleinhaus' <shani@scvas.org>; 'Mike Ferreira' <michaeljferreira@gmail.com>; Jerry De La Piedra <GDeLaPiedra@valleywater.org>
Subject: FW: Pacheco Reservoir NOP

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Cc: Debra Caldon <dcaldon@valleywater.org>
Subject: Fw: Pacheco Reservoir NOP

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Katja Irvin, AICP
Water Committee Chair
Sierra Club Loma Prieta Chapter

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Looking forward to meeting you in person.
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Water Committee Chair
Sierra Club Loma Prieta Chapter

Print Form

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For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Pacheco Reservoir Expansion Project

Lead Agency: Santa Clara Valley Water District
Contact Person: Melih Ozbilgin
Mailing Address: 5750 Almaden Expressway
Phone: (408) 630-2725
City: San Jose
Zip: 95118-3686
County: Santa Clara

Project Location: County: Santa Clara
City/Nearest Community: Gilroy
Cross Streets: State Route 152 and El Toro Road
Zip Code: 95023
Longitude/Latitude (degrees, minutes and seconds): 121 ° 17 ′ 32 ″ N / 37 ° 3 ′ 25 ″ W Total Acres:
Assessor's Parcel No.: Multiple
Section: n/a
Twp.: n/a
Range: n/a
Base: n/a
Within 2 Miles: State Hwy #: 152
Waterways: Pacheco Creek, Pajaro River
Airports:
Railways:
Schools:

Document Type:

CEQA: ☒ NOP ☐ Early Cons ☐ Neg Dec ☐ Mit Neg Dec ☐ Draft EIR ☐ Supplement/Subsequent EIR (Prior SCH No.) ☐ Other:
NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI
Other: ☐ Joint Document ☐ Final Document ☐ Other:

Local Action Type:

☐ General Plan Update ☐ General Plan Amendment ☐ General Plan Element ☐ Community Plan
☐ Specific Plan ☐ Master Plan ☐ Planned Unit Development ☐ Site Plan
☐ Rezone ☐ Prezone ☐ Use Permit ☐ Land Division (Subdivision, etc.)
☐ Annexation ☐ Redevelopment ☐ Coastal Permit ☐ Other:

Development Type:

☐ Residential: Units Acres
☐ Office: Sq.ft. Acres Employees
☐ Commercial: Sq.ft. Acres Employees
☐ Industrial: Sq.ft. Acres Employees
☐ Educational:
☐ Recreational:
☒ Water Facilities: Type Reservoir Expansi MGD
☐ Transportation: Type
☐ Mining: Mineral
☐ Power: Type MW
☐ Waste Treatment: Type MGD
☐ Hazardous Waste: Type
☐ Other:

Project Issues Discussed in Document:

☒ Aesthetic/Visual ☒ Agricultural Land ☒ Air Quality ☒ Archeological/Historical ☒ Biological Resources ☐ Coastal Zone ☐ Drainage/Absorption ☐ Economic/Jobs
☐ Fiscal ☒ Flood Plain/Flooding ☒ Forest Land/Fire Hazard ☒ Geologic/Seismic ☒ Minerals ☒ Noise ☒ Population/Housing Balance ☒ Public Services/Facilities
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☒ Vegetation ☒ Water Quality ☒ Water Supply/Groundwater ☒ Wetland/Riparian ☒ Growth Inducement ☒ Land Use ☐ Cumulative Effects ☐ Other:

Present Land Use/Zoning/General Plan Designation:

Land zoning designations for the parcels are agricultural ranchlands. Surrounding land uses include grazing, water storage and

Project Description: *(please use a separate page if necessary)*

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Revised 2010

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "**X**".
If you have already sent your document to the agency please denote that with an "**S**".

X	Air Resources Board	X	Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
	California Emergency Management Agency	X	Parks & Recreation, Department of
	California Highway Patrol		Pesticide Regulation, Department of
X	Caltrans District #4	X	Public Utilities Commission
	Caltrans Division of Aeronautics	X	Regional WQCB #3
	Caltrans Planning	X	Resources Agency
	Central Valley Flood Protection Board		Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy		S.F. Bay Conservation & Development Comm.
	Coastal Commission		San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
X	Conservation, Department of		Santa Monica Mtns. Conservancy
	Corrections, Department of	X	State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
	Education, Department of	X	SWRCB: Water Quality
	Energy Commission	X	SWRCB: Water Rights
X	Fish & Game Region #3 & 4		Tahoe Regional Planning Agency
X	Food & Agriculture, Department of		Toxic Substances Control, Department of
X	Forestry and Fire Protection, Department of	X	Water Resources, Department of
	General Services, Department of		
	Health Services, Department of		Other:
	Housing & Community Development		Other:
X	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date 08/11/17 Ending Date 09/11/17

Lead Agency (Complete if applicable):

Consulting Firm: Stantec
Address: 3301 C Street, Suite 1900
City/State/Zip: Sacramento, CA 95817
Contact: Mary Paasch
Phone: 916-418-8414

Applicant: Santa Clara Valley Water District
Address: 5750 Almaden Expressway
City/State/Zip: San Jose, CA 95118-3686
Phone: (408) 630-2725

Signature of Lead Agency Representative: _____ **Date:** 8/4/2017

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

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3.7 Sierra Club Loma Prieta 3

SIERRA CLUB
LOMA PRIETA

Sierra Club Loma Prieta Chapter
Serving San Mateo, Santa Clara and San Benito Counties
Protecting Our Planet Since 1933

3921 East Bayshore Road, Suite 204
Palo Alto, CA 94303

Pacheco Reservoir Expansion Project Environmental Impact Report Scoping Comments

October 11, 2017

Please incorporate the following comments in the Environmental Impact Report (EIR) for the Pacheco Reservoir Expansion Project.

In the Project Description, provide additional information on the following project activities and impacts.

1. In the list of project benefits in the Introduction, include the benefit of additional M&I water supplies to support population growth. Santa Clara Valley Water District will apply for junior water rights to use water from the Pacheco Creek watershed and this is a major and essential aspect of project operations.
2. The Project Description says "Water will be collected in the new reservoir during the winter months from runoff from the local watershed area, and diversion of CVP supplies from Pacheco Pipeline, when needed." The specific conditions for diversion of Central Valley Project (CVP) supplies to Pacheco Reservoir should be described in detail in the Project Description.
3. Project Description includes only 2.7 miles of new permanent roads and does not mention any trails. Provide additional information explaining how the entire lake area will be accessed for monitoring so the impacts of monitoring activities can be assessed. Will the lake be accessed by boat, by foot, via other roadways, or will drones by used to inspect conditions and test water quality? All grading should be subject to county grading permits.
4. Describe any public and recreational access that will be allowed, including facilities such as bathrooms, running water, and trails, etc. in the Project Description or state clearly how the facility will be secured to prevent public access. Under hydrology, the Initial Study says "Beneficial Uses at Pacheco Reservoir include … water contact and non-contact water recreation [and] navigation and commercial and sport fishing ..." These declared uses of the Reservoir could have environmental impacts and need to be explained in the Project Description. Recreation impacts include introducing trash, hazardous fluids from additional vehicles, biological waste, fishing equipment including hooks, and invasive species. People and their dogs could also kill species of concern or damage habitat, and may cause erosion if they don't stay on trails. If boats or mountain bikes are allowed, these impacts increase. Analyze impacts on Biological Resources, Water Quality, and Traffic.

5. Will the project include a fish ladder? Describe the fish ladder and its operation in the Project Description or provide reasons for not including a fish ladder to benefit anadromous fish species.
6. When describing construction of Project Facilities, describe cut and fill activities in more detail. This information is needed to analyze the impacts of extracting, storing, processing, and transporting such materials during construction.
   - Quantify the amount (cubic yards) of materials that will be provided by "local barrow" and the amount that will be imported including sand, gravel, and concrete.
   - Estimate amount and type of spoils (cubic yards) to be deposited at each deposit area or to be delivered to specific locations offsite.
   - When estimating the materials needed for project construction, include materials for the temporary coffer dam. The Initial Study says material for the cofferdam would be "imported from the random fill borrow sources, spillway excavation, and removal of the North Fork Dam." Identify the quantify of materials needed to construct the dam (cubic yards), how much will be acquired from each onsite source, and where additional materials will be acquired.
   - The Initial Study says "[d]rain and filter materials for the permanent replacement dam are anticipated to be sourced from local commercial vendors or facilities." Identify the quantity of these materials required (cubic yards) and the locations where drain and filter materials will be sourced.
   - Identify all temporary and permanent locations where spoils and borrow materials will be placed and provide detailed site plans in the EIR to show the layout of each storage and staging area and surrounding conditions.
7. The Initial Study says Site Preparation of Borrow Areas "would include logging, stripping and disposal of topsoil, and implementation of any associated work access or material processing areas." Estimate the quantity (cubic yards) of topsoil and the number of trees to be removed and identify the destination for these materials so the impact of these activities can be analyzed. All grading should be subject to county grading permits.
8. The Initial Study says that "material processing areas could include a crushing and screening plant at the filter and drain borrow area and a concrete batch plant near the spillway excavation." The EIR must discuss County permitting requirements to run a mining operation (a quarry) and a cement plant over the six-year construction period.
   - State and County permitting requirements for such facilities must be followed, including development of a Reclamation Plan.
   - Estimate the quantity (cubic yards) of each material type (low plasticity silt or clay, silt, sand, gravel and boulders) to be excavated and processed at the new mining facility. Estimate the quantity of each material type (drain/filter rock, etc.) to be imported for the batch plant. This information is needed to analyze and evaluate the impacts of this construction project.
   - Quarries and sand mines require a lot of water and wastewater can be toxic and harmful to streams and groundwater. Water use and water quality impacts must be studied and mitigated.

- The air quality impacts of the batch plant must be studied and mitigated.

9. Describe demolition of existing dam in more detail including quantity of materials, where materials will be stockpiled, and location of offsite disposal so specific impacts can be evaluated. Describe the process of segregating demolition materials including water supply needed in segregation process and impacts and water quality impacts from waste water.
10. Quantify water demand for construction.
    - Estimate how much water will be used for processing barrow materials, for batch plant operations, and for embankment construction moisture conditioning, where this water will come from, and how will it be delivered.
    - Discuss the impacts of moisture conditioning on water flows, especially during the summer and in the event a drought occurs during the construction period.
    - Analyze how this use of water during six years of construction will impact stream conditions for fish and other aquatic species, and how it impact groundwater subbasins that receive water from Pacheco Creek.
11. Describe construction and use of the temporary diversion channel in the Project Description and show the location on site plans. Discuss diversion of surface water during construction and the impacts of those diversion on aquatic species, groundwater, etc.
12. The following aspects of Project Operations need to be described and discussed in order to understand the project impacts:
    - How will CVP water quality issues be mitigated?
    - How will potential migration of mussels from San Justo Reservoir be prevented?
    - What are the impacts of sedimentation and related maintenance activities over the life of the project including mitigations in case there is a fire? ("Climate, wildfire, and erosion ensemble foretells more sediment in western USA watersheds," Geophysical Research Letters, September 2017)
13. Provide more details about water rights to be acquired.
    - Discuss water supply potential from local runoff based on historic data.
    - Describe the amount and timing of new water diversions from North Fork of Pacheco Creek to other reservoirs or water treatment plants in Santa Clara County.
14. The description of Project Operations should include more information about benefits to USFWS' Refuge Water Supply Program. Define "below normal water year" and estimate deliveries to refuges based on last 30 years of CVP deliveries. Analyze the impact of these deliveries on water supply in Santa Clara County.
15. Under Santa Clara Valley Water District Operations, the Initial Study says "[d]uring years when SCVWD water supplies exceed the water demands in the SCVWD service areas and excess storage capacity is available in the expanded reservoir, SCVWD would convey CVP supplies from San Luis Reservoir through Pacheco Conduit and into the expanded Pacheco Reservoir."
    - Describe under what conditions will water be pumped into Pacheco Reservoir from the Pacheco Conduit and under what conditions water will be pumped back into the

Conduit or released to Pacheco Creek / Pajaro River, including conditions for use of Pacheco instead of Calero and Anderson reservoirs.

- Describe in detail the conditions for conveying supplies to Pacheco Reservoir instead of Calero and Anderson reservoirs.
- Discuss water supply potential from CVP supplies based on defined conditions, use historic data over the past 30 years to show how much would have been transferred to Pacheco Reservoir each year so impacts can be analyzed.

16. The description of Project Operations should discuss changing flow conditions in the Pacheco Conduit and analyze additional maintenance needs and possible risks of failure due to flow/pressure changes with Pacheco operations. At times there will be no flow and other times water will flow in and out of the reservoir at 490 cubic feet/second.

Project Benefits

- Quantify the benefit to fisheries of restoring ½ mile of spawning habitat. Use autumn 2017 Steelhead conditions as baseline. Conditions changed when new water release mechanisms were installed on the North Fork Dam around 2014.
- Explain how the increased storage capacity provides ecosystem Improvements in the San Joaquin River Watershed so we can understand the impacts. Is new water available because increased is water captured in the watershed (new water rights)? Or is the water CVP water that would otherwise be "lost"?
- Explain how the Project will "provide emergency water supplies in the event of disruption in Delta water supplies" so impacts can be analyzed. How will operations plans make sure emergency supplies can be withdrawn when needed?
- Describe the operational specifics of incremental increased storage during flood season for Flood Damage Reduction so impacts can be analyzed. How much storage will be allocated in the reservoir for flood control? If releases are stopped due to high flows in the South Fork of Pacheco Creek, how will overtopping of the dam be prevented?

Aesthetics

- The Initial Study says "[c]onstruction activities may require double shifts—two, 10-hour shifts per day, up to six days per week—to meet the construction schedule. Therefore, nighttime lighting may be required during the temporary construction period." Although not considered a significant impact, as mitigation both temporary and permanent lighting should be minimized, shielded and directed only to the areas needing light.

Agricultural and Forestry Resources

- The Initial Study says "some forest land would temporarily be converted to non-forest uses for construction equipment staging areas." There is no such thing as temporarily converting forest land / Oak woodlands. The conversion would essentially be permanent and must be analyzed as such. Avoid destruction of oak woodlands for temporary staging areas that will not be inundated by the reservoir. There should be other feasible locations for those facilities.

Air Quality

- Estimate number of truck trips during construction so air quality impacts can be quantified.
- Analyze emissions and air quality impacts from burning fuel for new pumping in and pumping out of imported water supplies.
- Analyze emissions and air quality impacts from concrete batch plant operations.
- Analyze the impacts of tree removal and loss of forest land on air quality and greenhouse gas emissions.

Biological Resources

- The Initial Study notes that "[o]ther special status species have potential to occur within the Project area, but no comprehensive surveys have been performed to date." At a minimum, surveys for the following special status plants and wildlife must be conducted so impacts can be identified:
    - Invertebrate: Bay Checkerspot Butterfly
    - Amphibians and Reptiles: California Tiger Salamander, California Red-legged Frog, Western Pond Turtle
    - Birds: Western Burrowing Owl, Least Bell's Viero, Tricolored Blackbird
    - Mammals: San Joaquin Kit Fox
    - Plants: Tiburon Indian Paintbrush, Coyote Ceanothus, Mount Hamilton Thistle, Santa Clara Valley Dudleya, Fragrant Fritillary, Loam Prieta Hoita, Smooth Lessingia, Metcalf Canyon Jewelflower, and Most Beautiful Jewelflower
- How will Critical Habitat and Essential Fish Habitat be impacted by water quality, additional nitrates and any other substances delivered with CVP water? Higher levels of nitrates and potential for algae blooms must be analyzed as a potential impact on fish and other aquatic species around the reservoir and all the way downstream to Monterey Bay.
- The Initial Study says "[p]roject construction and operations could introduce nonnative aquatic species to Pacheco Reservoir, Pacheco Creek, and the Pajaro River." Include mitigation measures to prevent possible mussel invasion from San Justo Reservoir.
- The Initial Study says "the potential for greater flows downstream of the reservoir during the growing season could result in beneficial effects on riparian habitats." Explain how releasing water during the growing season will benefit riparian habitats more than current operations.
- Using hydrology over that past 30 years, show how benefits to the wildlife refuges and San Joaquin riparian habitats would have occurred in below normal water years. This will provide an approximation of the benefits to be received in the future. Since this benefit is defined as part of the project, it cannot be used as mitigation for loss of wetlands or other habitat caused by the Project.
- The Initial Study says "[r]educed water quality, discharged from the reservoir as a result of dewatering, has the potential for adverse impacts on fish in Pacheco Creek." The analysis should also consider the impacts of dewatering on other species downstream of the dam.
- The Initial Study discusses policies such as tree removal ordinances. This discussion should include discussion of Santa Clara County Guide to Evaluating Oak Woodlands Impacts.

- Analyze impacts of tree removal and loss of woodland habitat on Biological Resources.
- Discuss the impacts on Biological Resources of 24x7 construction over six years including noise, nighttime lighting, and traffic danger, especially impacts on wildlife movement and injury to species such as mountain lions, lynxes and foxes.

Geology and Soils

- The Initial Study says "Serpentinite rock, common in the Franciscan Assemblage, has not been identified within the Project area. Should such sensitive rock deposits be encountered, removal of erodible earth materials in undisturbed areas would be considered potentially significant." Explain why there is no serpentinite rock, but there are serpentine soils and discuss impacts of possible erosion of serpentine soils.

Hydrology

- The Initial Study says "Pacheco Reservoir releases are not known to contribute to the identified impairments to Beneficial Use. However, Beneficial Uses at Pacheco Creek are identified as impaired under CWA Section 303(d) due to high concentrations of fecal coliforms, low dissolved oxygen and turbidity sourced from agriculture, natural and grazing-related sources, as well as from storm drainage discharges, animal discharges, and sewer spills and leaks…" Discuss how issues with CVP water quality (high levels of nitrates and other toxins) could further impact water quality downstream of the new dam. How will operations mitigate the potential for toxic algae in the reservoir and downstream in the Pacheco Creek, San Felipe Lake, Pajaro River system?
- Discuss the water quality impacts of both temporary haul roads and permanent road improvements include creek crossings.
- The Initial Study says the Project has the "potential to provide positive contributions in seven California groundwater subbasins, increasing water for recharge downstream of the reservoir in Pacheco Creek and the Pajaro River." Explain how operations will provide additional groundwater to each of these seven subbasins. Will additional water rights be required? If not required explain why water rights will not be required.
- The Initial Study says "[e]xcavation of the borrow areas may locally alter drainage runoff patterns, but would not increase the timing or amount of runoff to nearby waters." This doesn't make sense. Explain how altered drainage runoff patterns will not impact the timing and amount of runoff to nearby waters.

Noise

- Discuss the impacts of construction noise and operations (pumping) noise on noise-sensitive species such as bats.
- Describe in more detail the amount and location of blasting so the impacts can be evaluated. One to two times per week for how many years? Number and size of blasts on each occasion?

Population and Housing

- The Initial Study says the "Project increases the capacity of the existing reservoir, providing a more reliable water supply for SCVWD and other San Felipe Division contractors. The Project's potential for increased population growth will be evaluated in the EIR." As part of this evaluation the EIR needs to estimate the amount of new water supply to become available due to the project, and the amount to be lost due to Incremental Level 4 water supply deliveries. New water supplies will support continued rampant population growth in Santa Clara and San Benito counties. Explain how the limits on water supply will change due to this project and how the higher supplies will enable population growth. Estimate when growth would be limited by lack of water supplies with and without the project. Use 2017 Water Supply Master Plan assumptions for this analysis rather than 2015 UWMP assumptions.

Transportation and Traffic

- The Initial Study says the "proposed Project would result in increased traffic on SR 152, and could further degrade operation at roadway locations already operating at unacceptable LOS. However, the effect would be temporary." Six years hardly seems temporary. Highway 152 roadway improvements will be needed and the impact of constructing those improvements must be analyzed. The EIR needs to identify where offsite materials will be coming from and where spoils will be delivered offsite. Also analyze potential impact on other roads such as highways 101 and 156 and other busy local roads in Santa Clara and San Benito counties, including those near the landfills in Gilroy and Hollister.

Utilities and Service Systems

- Explain how wastewater will be handled during operation. Where will maintenance workers go to access facilities? If recreation is part of the project, where will visitors go?
- Analyze whether or not enough water will be available onsite during the entire construction phase to support construction activities. If not, where will water be delivered from and what is the impact of using and delivering that water?
- The Initial Study says "[o]peration of the expanded reservoir will require a combination application/petition from the State Board for the proposed new structures, and a new water right and change in use." Changed operations could impact the use of San Luis Reservoir. Discuss how operation of Pacheco Reservoir for CVP supplies will impact water supplies for other users of San Luis Reservoir.
- Solid Waste Disposal resulting from barrow, excavation, and demolition needs to be quantified (cubic yards of each type of material) and disposal sites identified in order to evaluate impacts. Please refer to earlier comments about the Project Description. See comments #6-9 above.

Mandatory Findings of Significance

- Cumulative construction impacts must be analyzed. Construction at Pacheco Reservoir is anticipated to take approximately five-and-a-half years from 2024 to 2028. The High Speed Rail 2016 Business Plan says they expect to begin serving passengers on the line from the

Silicon Valley to the Central Valley in 2025. If deadlines are met for HSR construction, there would be about one year of overlap in construction. However, HSR construction is likely to be delayed and construction of the two projects in the Pacheco Pass area could be simultaneous for several years. Therefore the EIR must analyze cumulative construction impacts including air quality, wildlife movement, noise, traffic, impacts on roads, impacts on landfill facilities able to handle construction debris and spoils, and impacts of acute demand for construction materials such as concrete, sand and gravel.

Alternatives

- The main purpose of the Project is water supply. The other benefits are not within SCVWD's scope of responsibility to provide water supply, flood protection, and stream stewardship for Santa Clara County. Flood control, fish improvements and deliveries to wildlife refuges are just conjunctive benefits to make the project acceptable to other agencies that have a say in project approval or funding. Alternatives should not be eliminated because they do not provide those other benefits of the project. Any alternative that provides the needed water supply benefits should be considered a viable alternative.
- Possible alternatives that should be considered:
  - A much smaller reservoir could have many of the same benefits while greatly reducing environmental impacts
  - A combination of other water supply projects that can facilitate storage of CVP supplies, such as increased utilization of Semitropic, and diversion of excess CVP water to a restored Coyote Valley floodplain
  - Other water supply projects such as recycled water could also provide sufficient water supply and free up delta supplies for the refuges

3.8 Sierra Club Loma Prieta 4

SIERRA CLUB
LOMA PRIETA

SAN MATEO, SANTA CLARA & SAN BENITO COUNTIES

March 15, 2021

Santa Clara Valley Water District
Attn: Todd Sexauer
via email

Re: Scoping Comments for the Pacheco Reservoir Expansion Project

Dear Mr. Sexauer,

The Sierra Club Loma Prieta Chapter appreciates the opportunity to provide scoping comments for the Environmental Impact Report (EIR) for the Pacheco Reservoir Expansion Project. Please find our detailed comments attached. These comments replace previous scoping comments submitted by the Sierra Club on October 11, 2017.

In addition to these comments, please consider the following requests with respect to planning and environmental evaluation for the Pacheco Project.

1. It is important to closely coordinate this project with the B.F. Sisk Dam Raise to make sure these projects are not duplicating efforts and to avoid over-investing in capital projects to support a limited supply of imported water.
2. As the State Water Contractors requested of the California Department of Water Resources (DWR) to consider the cost effectiveness of the Delta Conveyance Project in their CEQA analysis (Valley Water CEO Bulletin, February 19 – March 4, 2021), we request that cost effectiveness be considered as part of the CEQA analysis of the Pacheco Project. This study should include the entire cost of the project to all tax payers and rate payers, not just the Valley Water local cost share.
3. Please respond to all previous scoping comments for the Pacheco Project submitted in 2017 (including those submitted by the Santa Clara Valley Audubon Society).

Thank you for your consideration of these comments. We also appreciate Valley Water's commitment to inform the public and allow for public input through the CEQA process, and through other varied public input opportunities.

Sincerely,

Katja Irvin

Katja Irvin, AICP
Water Committee Chair
Sierra Club Loma Prieta Chapter

sierraclub.org/loma-prieta ~ 3921 East Bayshore Road, Suite 204, Palo Alto, CA 94303

SIERRA CLUB
LOMA PRIETA

SAN MATEO, SANTA CLARA & SAN BENITO COUNTIES

Pacheco Reservoir Expansion Project Environmental Impact Report Scoping Comments

October 11, 2017
Revised March 14, 2021

Please address the following comments in the Environmental Impact Report (EIR) for the Pacheco Reservoir Expansion Project.

In the Project Description, provide additional information on the following project activities and impacts.

1. In the list of project benefits in the Introduction, include the benefit of additional M&I water supplies to support population growth. Santa Clara Valley Water District will apply for junior water rights to use water from the Pacheco Creek watershed and this is an essential aspect of project operations.
2. The Project Description says "Water will be collected in the new reservoir during the winter months from runoff from the local watershed area, and diversion of [Central Valley Project (CVP)] supplies from Pacheco Pipeline, when needed." Provide more information about supplemental flows from Valley Water's share of contracted CVP water pumped from San Luis Reservoir. Specifically describe the conditions under which water will be pumped to Pacheco Reservoir in relation to water rights, supply allocations, water demands, availability of other water supplies, and conveyance limitations of the Pacheco Conduit.
3. The Project Description includes only 2.7 miles of new permanent roads and does not mention any trails. Provide additional information explaining how the entire lake area will be accessed for monitoring so the impacts of monitoring activities can be assessed. Will the lake be accessed by boat, by foot, via other roadways, or will drones by used to inspect conditions and test water quality?
4. Describe any public and recreational access that will be allowed, including facilities such as bathrooms, running water, and trails, etc. in the Project Description or state clearly how the facility will be secured to prevent public access. Under hydrology, the Initial Study says "Beneficial Uses at Pacheco Reservoir include ... water contact and non-contact water recreation [and] navigation and commercial and sport fishing ..." These declared uses of the Reservoir could have environmental impacts and need to be explained in the Project Description. Recreation impacts include introducing trash, hazardous fluids from additional vehicles, biological waste, fishing equipment including hooks, and invasive species. People and their dogs could also kill species of concern or damage habitat, and may cause erosion if they don't stay on trails. If boats or mountain bikes are allowed, these impacts increase. Analyze impacts on Biological Resources, Water Quality, and Traffic.
5. Will the project include a fish ladder? Describe the fish ladder and its operation in the Project Description or provide reasons for not including a fish ladder to benefit anadromous fish species.

6. When describing construction of Project Facilities, describe cut and fill activities in more detail. This information is needed to analyze the impacts of extracting, storing, processing, and transporting such materials during construction.
   - Provide grading quantities (cubic yards) for road construction including temporary access roads and identify the type and quantity of materials imported for road construction.
   - For dam construction, quantify the type and amount (cubic yards) of materials that will be provided by "local barrow" and the amount that will be imported including sand, gravel, and concrete.
   - Estimate amount and type of spoils (cubic yards) to be deposited at each deposit area or to be delivered to specific locations offsite.
   - When estimating the materials needed for project construction, include materials for the temporary coffer dam. The Initial Study says material for the cofferdam would be "imported from the random fill borrow sources, spillway excavation, and removal of the North Fork Dam." Estimate the type and quantity of materials needed to construct the dam (cubic yards), how much will be acquired from each onsite source, and where additional materials will be acquired.
   - The Initial Study says "[d]rain and filter materials for the permanent replacement dam are anticipated to be sourced from local commercial vendors or facilities." Estimate the type and quantity of these materials required (cubic yards) and the locations where drain and filter materials will be sourced.
   - Identify all temporary and permanent locations where spoils and borrow materials will be placed and provide detailed site plans in the EIR to show the layout of each storage and staging area and surrounding conditions. Likewise for materials processing areas.
7. The Initial Study says Site Preparation of Borrow Areas "would include logging, stripping and disposal of topsoil, and implementation of any associated work access or material processing areas." Estimate the quantity (cubic yards) of topsoil and the number of trees to be removed and identify the destination for these materials so the impact of these activities can be analyzed.
8. The Initial Study says that "material processing areas could include a crushing and screening plant at the filter and drain borrow area and a concrete batch plant near the spillway excavation." The EIR must discuss permitting requirements to run a mining operation (a quarry) and a cement plant over the eight-year construction period.
   - State and federal permitting requirements for such facilities must be followed, including development of a Reclamation Plan. If it can be determined that a Reclamation Plan isn't needed, please explain why such a plan isn't needed.
   - Estimate the quantity (cubic yards) of each material type (low plasticity silt or clay, silt, sand, gravel and boulders) to be excavated and processed at the new mining facility. Estimate the quantity of each material type (drain/filter rock, etc.) to be imported for the batch plant. This information is needed to analyze and evaluate the impacts of this construction project.
   - Quarries and sand mines require a lot of water and wastewater can be toxic and harmful to streams and groundwater. Provide an estimate of wastewater production and

describe how wastewater will be treated and disposed of. Water use and water quality impacts must be analyzed and mitigated.

- The air quality impacts of the batch plant must be analyzed and mitigated.

9. Describe demolition of the existing dam in more detail including the type and quantity of materials, where materials will be stockpiled, and location of offsite disposal so specific impacts can be evaluated. Describe the process of segregating demolition materials including water supply needed in segregation process and impacts and water quality impacts from waste water.
10. Quantify water demand for construction.
    - Estimate how much water will be used for mining and processing barrow materials, for batch plant operations, and for embankment construction moisture conditioning. Identify where this water will come from, and how will it be delivered.
    - Discuss the impacts of moisture conditioning on flows in Pacheco Creek, especially during the summer and in the event a drought occurs during the construction period.
    - Analyze how this use of water during eight years of construction will impact stream conditions for fish and other aquatic species, and how it will impact groundwater subbasins that receive water from Pacheco Creek.
11. Describe construction and use of the temporary diversion channel in the Project Description and show the location on site plans. Discuss diversions of surface water during construction and the impacts of those diversions on aquatic species, groundwater, etc.
12. The following aspects of Project Operations need to be described and discussed in order to understand the project impacts.
    - Describe potential CVP water quality issues and how those will be mitigated.
    - Describe potential migration of mussels from San Justo Reservoir and how this will be prevented.
    - Describe the impacts of sedimentation and related maintenance activities over the life of the project including mitigations in case there is a fire. (See *Climate, wildfire, and erosion ensemble foretells more sediment in western USA watersheds*, Geophysical Research Letters, September 2017, https://pubs.er.usgs.gov/publication/70190547)
13. Provide more details about water rights to be acquired.
    - Discuss water supply potential from local runoff based on historic data.
    - Describe criteria for the amount and timing of new water diversions from North Fork of Pacheco Creek to other reservoirs or water treatment plants in Santa Clara County.
    - In absence of water rights, explain how inflows into the reservoir will be calculated and how that information will be translated into releases from the reservoir.
14. The description of Project Operations should include more information about benefits to USFWS' Refuge Water Supply Program. Define "below normal water year" and estimate deliveries to refuges based on last 30 years of CVP deliveries. Analyze the impact of these deliveries on water supply in Santa Clara County.
15. Under Santa Clara Valley Water District Operations, the Initial Study says "[d]uring years when SCVWD water supplies exceed the water demands in the SCVWD service areas and excess storage capacity is available in the expanded reservoir, SCVWD would convey CVP

supplies from San Luis Reservoir through Pacheco Conduit and into the expanded Pacheco Reservoir."

- Describe under what conditions water will be pumped into Pacheco Reservoir from the Pacheco Conduit and under what conditions water will be pumped back into the Conduit or released to Pacheco Creek / Pajaro River, including conditions for use of Pacheco instead of Calero and Anderson reservoirs.
- Describe the conditions/criteria for conveying supplies to Pacheco Reservoir instead of Calero and Anderson reservoirs.
- Discuss water supply potential from CVP supplies based on defined conditions. Use historic data over the past 30 years to show how much would have been transferred to Pacheco Reservoir each year so impacts can be analyzed.

16. The description of Project Operations should discuss changing flow conditions in the Pacheco Conduit and analyze additional maintenance needs and possible risks of failure due to flow/pressure changes with Pacheco operations. At times there will be no flow and other times water will flow in and out of the reservoir at 490 cubic feet/second.

Project Benefits

- Quantify the benefit to fisheries of restoring ½ mile of spawning habitat. Use autumn 2017 Steelhead conditions as baseline. Conditions changed when new water release mechanisms were installed on the North Fork Dam around 2014.
- The flow targets for releases from Pacheco Reservoir to Pacheco Creek seem unrealistic given the water supply goals of the Project. According to the Initial Study, average monthly release targets to Pacheco Creek for South-Central California Coast steelhead amount to more than 9,500 AF/year, while the natural hydrology of the North Fork Pacheco Creek watershed yields an average of 13,000 AF/year. The proposed fish operation scenario does not seem realistic since the District also plans to get 6,000 AF/year in additional water supply according to water supply planning documents (20,000 AF/year in dry years according to the District's December 2017 presentation to the California Water Commission). Please explain in more detail how all these water supply benefits can be achieved.
- Explain how the increased storage capacity provided by the Project would allow SCVWD to provide up to 2,000 acre-feet of water to wildlife refuges in the San Joaquin River watershed during below normal water years, so impacts can be analyzed. Is new water available because increased is water captured in the Pacheco watershed (new water rights)? Or is the water provided CVP water that would otherwise be "lost"?
- Explain how the Project will "provide emergency water supplies in the event of disruption in Delta water supplies" so impacts can be analyzed. How will operations plans make sure emergency supplies can be withdrawn when needed?
- Describe the operational specifics of incidental increased storage during flood season for flood damage reduction so impacts can be analyzed. How much storage will be allocated in the reservoir for flood control? If releases are stopped due to high flows in the South Fork of Pacheco Creek, how will overtopping of the dam be prevented?

Regulatory Setting

- Please include the following regulatory issues and make sure they are addressed as appropriate: Oak Woodlands Management Plan for Santa Clara County; Surface Mining and Reclamation Act; relevant Groundwater Sustainability Plans; City of Hollister Performance Standards; and San Benito County, Hollister, and Gilroy General Plans. Under the city and county plans include public utilities (landfills) and traffic and transportation as applicable resources.
- Please provide a full list of permitting requirements when describing the Regulatory Setting. Include Williamson Act Contract Terminations in a list of permits and approvals required for the Project. Also, investigate the need for a Reclamation Plan to be developed for the mining of borrow areas and add this to the list or explain why such a plan isn't needed. Furthermore, investigate any approvals needed for a temporary fueling station and the importation of fuel for construction and include required permits as appropriate.

Aesthetics

- The Initial Study says "[c]onstruction activities may require double shifts—two, 10-hour shifts per day, up to six days per week—to meet the construction schedule. Therefore, nighttime lighting may be required during the temporary construction period." Although not considered a significant impact, as mitigation both temporary and permanent lighting should be minimized, shielded and directed only to the areas needing light.
- Analyze and assess impacts of construction traffic on the Santa Clara County Scenic Gateway as appropriate. Also consider cumulative traffic impacts as discussed below.

Agricultural and Forestry Resources

- The Initial Study says "some forest land would temporarily be converted to non-forest uses for construction equipment staging areas." There is no such thing as temporarily converting forest land / oak woodlands. The conversion would essentially be permanent and must be analyzed as such. Avoid destruction of oak woodlands for temporary staging areas that will not be inundated by the reservoir. There should be other feasible locations for those facilities.

Air Quality

- Estimate number of truck trips during construction so air quality impacts can be quantified.
- Analyze emissions and air quality impacts from burning fuel for new pumping in and pumping out of imported water supplies.
- Analyze emissions and air quality impacts from concrete batch plant operations.
- Analyze the impacts of tree removal and loss of forest land on air quality and greenhouse gas emissions.

Biological Resources

- The Initial Study notes that "[o]ther special status species have potential to occur within the Project area, but no comprehensive surveys have been performed to date." At a minimum, surveys for the following special status plants and wildlife must be conducted so impacts can be identified:
    - Invertebrate: Bay Checkerspot Butterfly

  - Amphibians and Reptiles: California Tiger Salamander, California Red-legged Frog, Western Pond Turtle
  - Birds: Western Burrowing Owl, Least Bell's Viero, Tricolored Blackbird
  - Mammals: San Joaquin Kit Fox
  - Plants: Tiburon Indian Paintbrush, Coyote Ceanothus, Mount Hamilton Thistle, Santa Clara Valley Dudleya, Fragrant Fritillary, Loam Prieta Hoita, Smooth Lessingia, Metcalf Canyon Jewelflower, and Most Beautiful Jewelflower
- How will Critical Habitat and Essential Fish Habitat be impacted by lower water quality due to additional nitrates and any other contaminants delivered with CVP water? Higher levels of nitrates and potential for algae blooms must be analyzed as a potential impact on fish and other aquatic species around the reservoir and downstream to Monterey Bay.
- The Initial Study says "[p]roject construction and operations could introduce nonnative aquatic species to Pacheco Reservoir, Pacheco Creek, and the Pajaro River." Include mitigation measures to prevent possible mussel invasion from San Justo Reservoir.
- The Initial Study says "the potential for greater flows downstream of the reservoir during the growing season could result in beneficial effects on riparian habitats." Quantify the potential for greater flows and explain how releasing water during the growing season will benefit riparian habitats compared to operation of the current reservoir.
- Using hydrology over that past 30 years, show how benefits to the wildlife refuges and San Joaquin riparian habitats would have occurred in below normal water years. This will provide an approximation of the benefits to be received in the future. Since this benefit is defined as part of the project, it cannot be used as mitigation for loss of wetlands or other habitat caused by the Project.
- The Initial Study says "[r]educed water quality, discharged from the reservoir as a result of dewatering, has the potential for adverse impacts on fish in Pacheco Creek." The analysis should also consider the impacts of dewatering on other species downstream of the dam.
- The Initial Study discusses policies such as tree removal ordinances. This should include discussion of the *Santa Clara County Guide to Evaluating Oak Woodlands Impacts* (https://www.sccgov.org/sites/dpd/DocsForms/Documents/Oakwoodlands_Guide.pdf). The discussion should also evaluate impacts on trees that are not removed but are nonetheless impacted by construction. Please consult the latest research when formulating mitigation for loss of Oak Woodlands.
- Analyze impacts of tree removal and loss of woodland habitat on Biological Resources. The California Native Plant Society has cautioned that planting a boxed tree from a nursery would not mitigate the loss of fauna and plant life that are part of the oak community.
- Provide sufficient mitigation for lost habitat due to the Project. Recent best practices for mitigation of prime habitat have changed to require much higher ratios than 1:1 or 2:1. For example, habitat lost due to the Panoche Valley Solar project in San Benito County is required to mitigate lost acreage at a 26:1 ratio.
- Discuss the impacts on biological resources of 24x7 construction over eight years including noise, nighttime lighting, and traffic danger – especially impacts on wildlife movement and injury to species such as mountain lions, lynxes and foxes.

Geology and Soils

- The Initial Study says "Serpentinite rock, common in the Franciscan Assemblage, has not been identified within the Project area. Should such sensitive rock deposits be encountered, removal of erodible earth materials in undisturbed areas would be considered potentially significant." Explain why there is no serpentinite rock, but there are serpentine soils and discuss impacts of possible erosion of serpentine soils.

Greenhouse Gas Emissions

- Aside from the impacts of the activities described under Air Quality, the Project will result in deforestation of oak and sycamore woodlands. Please analyze the impacts of deforestation on greenhouse gas emissions.
- Please analyze greenhouse gas emissions from the reservoir water surface. Refer to recent literature such as: *Greenhouse Gas Emissions from Reservoir Water Surfaces: A New Global Synthesis* (October 2016, BioScience 66(11)); and *Greenhouse Gas Emissions from Freshwater Reservoirs: What Does the Atmosphere See?* (2018, Ecosystems 21(5): 1058–1071).

Hazards and Hazardous Materials

- Hazardous materials could be in the rock and soil that is excavated from borrow sites and processed near the construction site. The Lehigh mining site in Cupertino has resulted in Selenium poisoning in Permanent Creek. The borrow areas should be tested for any possible harmful materials and analysis should be presented in this EIS/EIR. For mitigation in case materials are released (even if nothing shows up in the preliminary tests), require weekly or daily testing of Pacheco Creek downstream of the site and specify mitigations in case water quality issues are found.

Hydrology

- The Initial Study says "Pacheco Reservoir releases are not known to contribute to the identified impairments to Beneficial Use. However, Beneficial Uses at Pacheco Creek are identified as impaired under CWA Section 303(d) due to high concentrations of fecal coliforms, low dissolved oxygen and turbidity sourced from agriculture, natural and grazing-related sources, as well as from storm drainage discharges, animal discharges, and sewer spills and leaks…" Please analyze the impact on water quality and turbidity, and the potential for CVP water (high levels of nitrates and other toxins) to further impact water quality downstream of the new dam. Delta water is generally considered to be about three times as high in nutrients as local watershed derived water. How will operations mitigate the potential for toxic algae in the reservoir and downstream in the Pacheco Creek, San Felipe Lake, the Pajaro River, and the Monterey Bay?
- Analyze and assess how introduction of high nutrient and/or high salinity CVP water to the Pajaro River watershed will impact the Santa Clara Valley and Gilroy/Hollister groundwater basins.
- Analyze and mitigate potential water quality impacts of both temporary haul roads and permanent road improvements including creek crossings.
- The Initial Study says the Project has the "potential to provide positive contributions in seven California groundwater subbasins, increasing water for recharge downstream of the

reservoir in Pacheco Creek and the Pajaro River." Explain how operations will provide additional groundwater to each of these seven subbasins. Will additional water rights be required? If not required explain why water rights will not be required.

- The Initial Study says "[e]xcavation of the borrow areas may locally alter drainage runoff patterns, but would not increase the timing or amount of runoff to nearby waters." This doesn't make sense. Explain how altered drainage runoff patterns will not impact the timing of or increase the amount of runoff to nearby waters.

Noise

- Discuss the impacts of construction noise and operations (pumping) noise on noise-sensitive species such as bats.
- Describe in more detail the amount and location of blasting so the impacts can be evaluated. One to two times per week for how many years? Number and size of blasts on each occasion?

Population and Housing

- The Initial Study says the "Project increases the capacity of the existing reservoir, providing a more reliable water supply for SCVWD and other San Felipe Division contractors. The Project's potential for increased population growth will be evaluated in the EIR." As part of this evaluation the EIR needs to estimate the amount of new water supply to become available due to the project, and the amount to be lost due to Incremental Level 4 water supply deliveries. New water supplies will support continued population growth in Santa Clara and San Benito counties. Explain how the limits on water supply will change due to this project and how the higher supplies will enable population growth. Estimate when growth would be limited by lack of water supplies with and without the project. Use Water Supply Master Plan 2040 assumptions for this analysis rather than 2015 UWMP assumptions.

Transportation and Traffic

- The Initial Study says the "proposed Project would result in increased traffic on SR 152, and could further degrade operation at roadway locations already operating at unacceptable LOS. However, the effect would be temporary." Eight years hardly seems temporary. Highway 152 roadway improvements will be needed and the impact of constructing those improvements must be analyzed.
- The EIR needs to identify where offsite materials will be coming from and where spoils will be delivered offsite, as well as commute trips for three shifts of workers seven days per week. Analysis must include the impact on other roads such as highways 101 and 156 and other busy local roads in Santa Clara and San Benito counties, including those near the landfills in Gilroy and Hollister where spoils and other materials will be disposed.

Utilities and Service Systems

- Explain how wastewater will be handled during operation. Where will maintenance workers go to access facilities? If recreation is part of the project, where will visitors go?

- Analyze whether or not enough water will be available onsite during the entire construction phase to support construction activities. If not, where will water be delivered from, how will it be stored, and what is the impact of using and delivering that water?
- The Initial Study says "[o]peration of the expanded reservoir will require a combination application/petition from the State Board for the proposed new structures, and a new water right and change in use." Changed operations could impact the use of San Luis Reservoir. Discuss how operation of Pacheco Reservoir for CVP supplies will impact water supplies for other users of San Luis Reservoir.
- Analyze and assess the impact on solid waste landfills. Solid Waste Disposal resulting from barrow, excavation, temporary fill, dredged sediment, and demolition needs to be quantified (cubic yards of each type of material) and disposal sites identified in order to evaluate impacts. Analyze specific impacts on the South Valley Recology facility in Gilroy and the John Smith Landfill in Hollister. It is unlikely these facilities will be able to handle all the spoils and construction debris from the Project. Therefore, we request that additional landfills be identified and the associated impact assessed.
- Analyze and mitigate the impacts of water required for construction on water supply.
- Please refer to comments #6-10 under Project Description above.

Mandatory Findings of Significance

- Cumulative construction impacts must be analyzed. Construction at Pacheco Reservoir is anticipated to take more than seven years from 2024 to 2031. Construction for the Anderson Dam Retrofit Project is scheduled for the same time period. Construction for the B.F. Sisk Dam Safety of Dams Modification Project is expected to begin in 2021 and continue through 2029. The High-Speed Rail 2018 Business Plan says they expect to begin serving passengers on the line from the Silicon Valley to the Central Valley in 2033. If deadlines are met for High-Speed Rail construction, there would be several years of overlap in construction. The EIR must analyze cumulative construction impacts including air quality, wildlife movement, noise, traffic, impacts on roads, impacts on landfill facilities able to handle construction debris and spoils, and impacts of acute demand for construction materials such as concrete, sand and gravel.

Alternatives

- The main purpose of the Project is water supply. The other benefits are not within SCVWD's scope of responsibility to provide water supply, flood protection, and stream stewardship for Santa Clara County. Flood control, fish improvements and deliveries to wildlife refuges are just conjunctive benefits to make the project acceptable to other agencies that have a say in project approval or funding. Alternatives should not be eliminated because they do not provide those other benefits of the project. Any alternative that provides the needed water supply benefits should be considered a viable alternative.
- Possible alternatives that should be considered:
  1. The B.F. Sisk Dam Raise and Reservoir Expansion Project, either alone, or in combination with other projects such as the Los Vaqueros Reservoir Expansion Project and the Transfer-Bethany Pipeline Project can provide the same water supply benefits as the Project. Originally, the main benefit of the Pacheco project for Santa Clara County was 5,000 to 6,000 acre-feet per year of emergency water supply. Later Pacheco was also

put forth as the preferred alternative for the San Luis Low Point Improvement Project (SLLPIP). According to the recent Final Feasibility Report for the San Luis Dam Raise, that project will provide emergency water supply. The San Luis Dam Raise was also proposed as an alternative for the SLLPIP but was screened out because it was economically infeasible compared to other options. In light of the increased cost estimates for Pacheco, Valley Water should put resources into using the Sisk Dam Raise to fix the San Luis Low Point issues and provide emergency supplies for Santa Clara County. The relative economic feasibility of these two projects has changed.

2. A much smaller reservoir could have many of the same benefits while greatly reducing environmental impacts
3. Other water supply projects such as recycled water and Bay Area Regional Reliability projects could also provide sufficient additional water supply to mitigate emergency situations.

3.9 Transoceanic Systems

From: dorian@transoceanic.us
To: progers@bayareanewsgroup.com; Office of Communications; Pacheco Expansion
Subject: Pacheco Reservoir Expansion and TRANSOCEANIC Systems with Ultra-Large Marine Submersible (ULMS) boats for fresh water transportation - cooperation proposal
Date: Saturday, March 27, 2021 2:18:45 PM
Attachments: ULMS water transportation from Sitka Borough, AK to Monterey Bay, CA.xlsx

Dear All:

The TRANSOCEANIC Systems (transoceanic.us) with their Ultra-Large Marine Submersible (ULMS) boats for fresh water transportation represent an alternative, and also a strong complementary project to the Pacheco Reservoir Expansion.

The TRANSOCEANIC Systems can help Santa Clara Valley Water District and its partners to get all the needed high-quality water by importing it from Alaska or alternatively from Southern Mexico or other sources.

We append a simulation for a TRANSOCEANIC System transporting 140 000 acre-ft/year from Sitka Borough, Alaska to Monterey Bay (SiMno System) similar to the designed capacity of Pacheco Reservoir Expansion. The water transportation cost of the SiMon System is about $0.10 per cubic meter ($125/acre-ft), and the SiMon System investment ($247 million) is about one-tenth of the Pacheco Reservoir Expansion for delivering 140 000 acre-ft of water per year. Many of the existing land-based pipes and pumps in the Pacheco/Santa Clara area can be used for SiMon deliveries. The timeframe for building the SiMon TRANSOCEANIC System seems to be similar or shorter than the Pacheco Reservoir Expansion.

SiMon TRANSOCEANIC Project is a long-haul transportation project; closer water sources exist, but water quality should be taken into account, and Alaska's is hard to beat. There will be a cost at source to buy water, but any source of water will cost, maybe more in California than elsewhere.
The Pacheco Reservoir Expansion is a storage facility, generating little new water, while the SiMon System is mainly a new water transporter and import facility, and less a storage facility. That's why the Pacheco Expansion and the SiMon System are complementary: a supply system joining a storage system with good interconnections.
TRANSOCEANIC technology offers (maybe the only) solution to massive long-haul water transfers.
SiMon System and its further extensions will have a massive impact not only on coastal California but also on the Central Valley when using the Pacheco Pass access. TRANSOCEANIC Systems open access to massive quantities of water and also to specific irrigation drainage solutions.
Thus, we invite Santa Clara Valley Water District and its partners to evaluate and deploy the SiMon TRANSOCEANIC Project.
The Earmarks and the infrastructure funds would be just right for this Project if accessed, and TRANSOCEANIC LLC, USA offers all the support.
Sincerely,
Silviu Dorian Chelaru
Owner and CEO
Transoceanic LLC, USA
https://transoceanic.us/
dorian@transoceanic.us
+1-213-340-4320
References:
1. https://transoceanic.us/
2. https://www.valleywater.org/pachecoexpansion
3. https://www.washingtonpost.com/powerpost/earmark-congress-spending-cunningham/2021/03/12/cd135fb0-82c2-11eb-ac37-4383f7709abe_story.html

PROJECT SIMULATOR - TRANSOCEANIC ULMS (transoceanic.us)

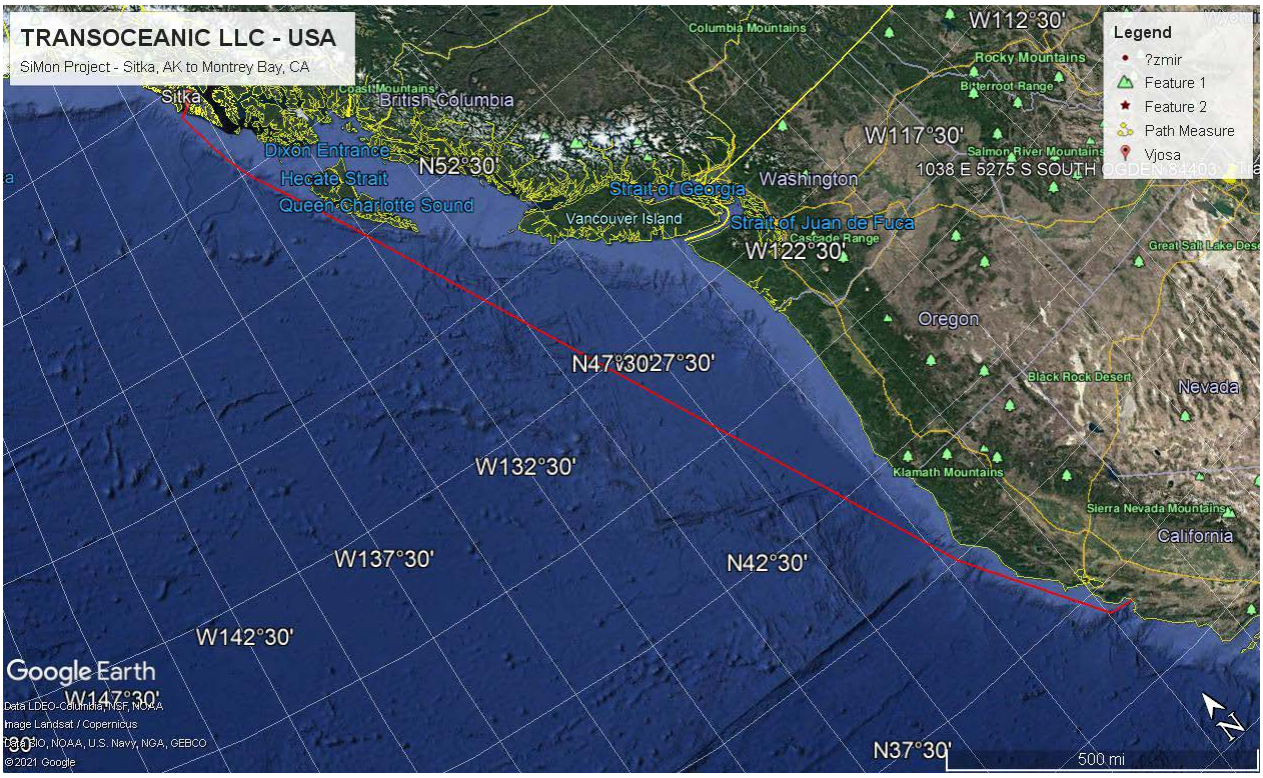
Supply station	**Sitka Borough, AK**	
Delivery station	**Monterey Bay, CA**	
Distance, one way, km	**2600**	
CONSTANTS AND TRANSFORMATIONS		
acre ft is	1233.48	cubic meters
ft is	0.3048	meters
Sea water density is	1028	kg/(cubic meter)
Pi value	3.14159	
SUBMERSIBLE TRANSPORTER GEOMETRY		
Radius, m	45	
Radius, ft	148	
L/(2R) RATIO	7	
Equivalent submersible length, m	630	
Submersible Section, square meters	6362	
Submersible surface (considered closed by hemispheres)	203575	
volume (considered cylindrical for equivalent length), cubic meters	4,007,883	
volume, acre-ft	3249.249	
BALLASTING		
relative density of concrete	2.4	
ballasting required (on cylindrical part), kg/square meters	630	
thickness of concrete wall, m	0.459	
Volume of concrete required, cubic meters	93478	
Volume of concrete required, cubic yards	122265	
Weight of concrete structure, tons	224348	
Chamber thickness, m	0.63	
Total hull thickeness, m	1.09	
STRESSES		
Max tangent force, Newton/linear meter	834,341	
Max tangent force, metric ton force/linear meter	85.050	
HYDRODYNAMICS		
cx (drag coefficient)	0.08	
speed v, m/s	2.2	
speed km/h	7.92	
Drag force, Newton	1,266,115	
Drag force, metric ton force	129.06	
Power required for moving (w)	2,785,452	
Power for moving, Mw	2.785	
POWER AND ENGINE		
Hydrodynamic efficiency	0.7	
Required Engine power, Mw	3.979	
Engine reserve, %	20%	
Total Engine installed Power	4.775	
FIXED COSTS		
SUBMERSIBLE COST		
Unit Concrete price, $/cubic meter	70.00	
Unit cost of armature, $/cubic meter	60.00	
Unit cost of work, $/cubic meter	120.00	
Total unit price of concrete, $/cubic meter	250.00	
Cost of concrete for submersible, $	$ 23,369,583	
PROPULSOR COSTS		
Cost of engine and propeller $/Mw	500,000	
Cost of propulsion	$ 2,387,530	
INSTRUMENTATION, COMMAND AND CONTROL (ICC) +OTHER		
Cost of ICC, BAGS OTHER STRUCTURES (AT 50% OF CONCRETE COST)	$ 11,684,791	
Complexity Factor	1.1	
Total cost of one submersible	**$ 41,186,095**	
VARIABLE COSTS (FUEL)		
FUEL COST PER HOUR		
Fuel Consumption, kg/kWh	0.165	
Fuel cost (LNG), $/kg	0.2207	
Cost of fuel per hour (at required power) $/hour	145	

TRIP COMPUTATION

Supply station	Sitka Borough, AK	
Delivery station	Monterey Bay, CA	
Distance, one way, km	2600	
Stationing, days at each station	3	
Cruise time, round trip, hours	656.57	
Cruise time, round trip, days	27.36	
Total travel time, hours	801	
Total travel time, days	33.36	
Fuel cost per trip (stationary at half consumption per hour), $	$ 105,573	
Amortization of submersible (25 year life) $/hour	376.13	
Cost of submersible per trip	$ 301,116	
Net cost per trip (submersible+fuel)	$ 406,689	
Net transport cost $/acre-ft	125.16	
G&A + profit	0%	
Brut cost per trip, $	406689	
Brut transport cost $/acre-ft	**125.16**	
Brut transport cost $/cu meter	**0.1015**	

TRANSPORTATION SYSTEM CONFIGURATION AND COST

Transported water, mil cubic m / year		173	172687200
Transported water, acre-ft per year		**140,254**	
Transporter capability per boat, trips/year		10.942	
Transporter capability per boat, mil cubic m/year		43.86	
Transporter capability per boat, acre-ft/year		35,554	
Required number of transporters		4	
Cost of transporters (boats)	$	**164,744,380**	
Cost of two stations (each equal to one transporter cost)	$	**82,372,190**	
Total cost of transportation system	$	**247,116,569**	
PARAMETERS			
Investment cost $/(acre-ft/year for 25 years))		1762	
Pressure drop equivalent, meters		167	
Water flow at stations for continuous filling/emptying, cubic m/sec		5.49	
Transportation system capability (acre-ft/yr)		142,217	
Total G&A and profit /year (transport)		-	
Unit cost of water at purchase ($/cubic meter)		0	
Total cost of water, $/year		-	
Markup (water)		0%	
Water sale profit, $/year (includes G&A)		-	
Total profit (transport and water), $/year (includes G&A)		-	
Total delivered price of water, $/year		**17,554,687.38**	
Unit price of water, delivered, $ / cubic meter		**0.101**	
Unit price of water, delivered, $ / acre-ft		**125.16**	


TRANSOCEANIC LLC - USA
SiMon Project - Sitka, AK to Montrey Bay, CA
Legend
?zmir
Feature 1
Feature 2
Path Measure
Vjosa
Sitka
British Columbia
Columbia Mountains
Rocky Mountains
Bitterroot Range
Salmon River Mountains
Dixon Entrance
Hecate Strait
Queen Charlotte Sound
Strait of Georgia
Vancouver Island
Washington
Strait of Juan de Fuca
Cascade Range
Oregon
Black Rock Desert
Nevada
Klamath Mountains
Sierra Nevada Mountains
California
W112°30'
W117°30'
W122°30'
N52°30'
N47°30'
N42°30'
N37°30'
W132°30'
W137°30'
W142°30'
W147°30'
27°30'
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Google Earth
Data LDEO-Columbia, NSF, NOAA
Image Landsat / Copernicus
GEBCO, NOAA, U.S. Navy, NGA, GEBCO
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3.10 Florek, Bill

From: Florek, Bill
To: Pacheco Expansion
Subject: Maintenance Question
Date: Tuesday, November 10, 2020 3:18:32 PM

My property borders several hundred feet of levee along Pacheco Creek. I am 63 years old and have lived here all my life. I have not seen any maintenance on any of the creek levees. (Exceptions - only in the areas where there had been a break) The levees are badly in need of maintenance due to burrowing holes made by vermin such as rats and mice as well as gophers, squirrels, and rabbits. Also, the levees are getting very thin due to the water erosion when the creek flows after heavy rains. What are your solutions for preparing and maintaining the Pacheco Creek levies for the expansion project. Thank you.

Bill Florek
408-623-6374

3.11 Giberson, Alan and Meg

March 12, 2021

Via electronic mail: PachecoExpansion@valleywater.org

RE: Environmental Impact Report for the Pacheco Reservoir Expansion Project, Comment Letter

Dear Valley Water Board of Directors and staff:

Thank you for the opportunity to comment on the Environmental Impact Report (EIR) for the Pacheco Reservoir Expansion Project. Pursuant to notice, we are pleased to submit these comments by the March 12, 2021 due date.

The Pacheco Reservoir Expansion alternative is a product of the San Luis Low Point Improvement Project search for ways to address San Luis Reservoir water quality and quantity/access issues ("low point" issue) associated with conditions occurring in summer months when water levels are low and algae can interfere with water deliveries. Extant treatments were judged inappropriate for dealing with the algae problem.

The Pacheco Reservoir Alternative was previously eliminated by the U. S. Bureau of Reclamation "related to the acceptability and effectiveness criteria, because it had more potential for environmental effects and the greatest costs." (https://files.ceqanet.opr.ca.gov/37062-3/attachment/i3oqCBqEZPa1STmO-6HJwnEsGCnHx3-RZARyInNGqNq_61xx9ACgryTPauUNyGezwKpBF7LofcT7maMV0). This finding was subsequently derailed by Santa Clara Valley Water District's (SCVWD, VW) application for funding under the WSIP program along with its claims of environmental benefits from the dam. However, new revelations about increased costs and reconsideration of environmental harm from potential extension of the reservoir into Henry Coe Park should preclude the Pacheco Reservoir expansion project.

The recent huge increase in cost of the Pacheco expansion project—from $1.3 billion to $2.5 billion—should rekindle Reclamation's earlier concerns and focus attention on other water resources that can supply reliability, improved water quality and equal or improved environmental and ecosystem benefits. The "low point" issue can be addressed without the proposed Pacheco new dam and reservoir expansion from 5500 af to 140,000 af capacity, cost over a billion dollars more than original estimates, and with likely further cost escalation, given geologic and construction unknowns.

The proposed expansion of San Luis Reservoir, for instance, via the Sisk Dam raise will provide an additional 130,000 acre-feet (af) of storage in San Luis Reservoir, producing additional water supply for two million people, over one million acres of farmland and 200,000 acres of wildlife refuges, according to the B.F. Sisk Dam Raise and Reservoir Expansion Project's Supplemental Environmental Impact Statement/Environmental Impact Report. This 130,000 af of extra water alone should obviate the need for the proposed new Pacheco dam and reservoir.

1

The proposed Pacheco Reservoir expansion—really a dam removal to be replaced by a new, much larger dam and reservoir one-half mile upstream on the same tributary—should not be constructed as planned. Instead, other, cost-effective water supply improvement measures and considerations available to the Santa Clara Valley Water District (SCVWD) should be considered first. Those other resources include, without limitation:

• Groundwater storage: Stanford Water in the West research has noted that surface water storage behind dams is five to nine times as expensive as groundwater. (https://news.stanford.edu/2016/07/21/cost-effective-path-drought-resiliency/, http://waterinthewest.stanford.edu/sites/default/files/Storing_Water_in_CA.pdf)

• Repair of existing dams (Anderson, Almaden, Calero and Guadalupe) could provide 55,000 af reclaimed storage.

• More and better reuse of wastewater from wastewater treatment plants (WWTPs) could supply tens of thousands of acre-feet of water. The total reuse of about 24,000 acre-feet per year (afy) potable water proposed recently by VW does not begin to address the hundreds of thousands of afy discharged to SF Bay from WWTPs. For instance, although the San Jose-Santa Clara WWTP, has a dry weather flow design capacity of 167 mgd (187,040 afy), it is limited to 120 mgd (134,400 afy) dry weather discharge "to control salt marsh conversion and protect endangered species" according to a SF Regional Water Quality Control Board staff report from March 11, 2009. (Ten mgd, or 11,200 afy, is allocated for non-potable reuse, NPR.)

• Capture and reuse of local stormwater would be another important source. As UCB distinguished professor David Sedlak noted in a 2015 TED talk, if the city of San Jose captured and stored just *half* of the stormwater that falls within the city limits each year, it would have enough water for the entire year. (https://www.ted.com/talks/david_sedlak_4_ways_we_can_avoid_a_catastrophic_drought)

• Water treatment enhancement: now that adequate filters have been put in place, local water agencies can use local stormwater flows formerly judged too "turbid" to replenish local aquifers. (http://www.mercurynews.com/2017/03/02/water-district-perc-ponds-pass-on-turbid-water-full-of-sediment/).

• New and enhanced raw water treatment capabilities could treat San Luis Reservoir water and reduce or eliminate interrupted deliveries when algae blooms are in the vicinity of the Pacheco Intake—as well as eliminating the need for a new Pacheco Reservoir. Such treatments have progressed (upgrades to area WWTPs, for instance) but should be given further consideration and review.

Given increasing temperatures from climate change with concomitant increasing toxic algae/cyanobacteria issues (harmful algal blooms, HABS), water quantity and quality are better

addressed without construction of yet another large dam in an inland area where daily temperatures *average* over 80 degrees F. from June to September. Also, the area surrounding the proposed Pacheco dam is relatively dry and would not contribute much to the reservoir's capacity.

Similarly, evaporative losses can be considerable, given that "reservoir evaporation in arid and semiarid regions is substantial, and it represents an important consideration for the future of water management in a water-scarce environment." (https://journals.ametsoc.org/bams/article/99/1/167/216151/Reservoir-Evaporation-in-the-Western-United-States) Evapotranspiration in California has been reported at approximately 2 maf/year from reservoirs and canals. (https://californiawaterblog.com/2019/05/12/some-innocent-questions-on-california-water-part-i/) Average urban water use is 7.9 maf/y (average of annual use 1998-2015) according to a PPIC report based on DWR statistics. (https://www.ppic.org/publication/water-use-in-california/)

The new Pacheco dam/ reservoir has been called a "source" of new water. However, Pacheco is not actually a "source"; rather it would store the rather low-quality water that comes primarily from San Luis Reservoir, which water in turn comes from the Delta. It is important to observe the policy expressed in the Delta Reform Act that California should "reduce reliance on the Delta in meeting California's future water supply needs through...investing in improved regional supplies, conservation and water use efficiency." Cal. Water Code § 85021.

Other water, as mentioned above, could compensate for Pacheco water. US Fish & Wildlife notes: "Safety and environmental benefits of dam removal are priceless. (See discussion of harmful effects of dams, and the benefits of dam removal at: https://www.fws.gov/southeast/pdf/fact-sheet/dam-removal.pdf) Dam removal allows natural flow patterns, to which native plants and animals are accustomed, to return to their original configuration. With Pacheco removal, such benefits could accrue to the federally threatened steelhead as the environment returns to pre-dam conditions in which those fish evolved.

Dam removal, in some instances, has been found to be more economical than allowing the dams to continue, saving between $5.4 billion and $12.4 billion—even where dams are producing hydropower. (https://www.eenews.net/stories/1061355907)

A 2014 survey by Theodore Grantham of UC Davis and Joshua Viers of UC Merced suggested other ways of dealing with California's overallocation of water. The solution, they wrote, is to "bring California's water allocation system into the 21st century. That means innovations in water use, new recycling and storage technology, and a modernization of the legal landscape. *It doesn't mean building multibillion-dollar dams that yield relative droplets of water by taking them away from some users and giving them to others. That's 100-year-old thinking, and we need to move past it.*" "100 years of California's water rights system: patterns, trends... uncertainty", https://watershed.ucdavis.edu/files/content/news/WaterRights_UCDavis_study.pdf. [emphasis added]

3

Rather than ameliorating the effects of climate change, dams are actually responsible for contributing to climate change by significantly increasing greenhouse gas (GHG) emissions from their operations, according to several studies, including an October 2016 study, which posited reservoirs' production of as much as 1.3% of human-caused GHG. (Greenhouse Gas Emissions from Reservoir Water Surfaces: A New Global Synthesis, available at https://academic.oup.com/bioscience/article/66/11/949/2754271; another discussion of dam/reservoir problems is available at: https://www.sciencedaily.com/releases/2018/11/181113141804.htm, discussing supply-demand cycle and the reservoir effect).

Water storage reservoirs have been found to contribute as much GHG as Canada, significant especially because of the methane component of the emissions. (https://www.newsdeeply.com/water/community/2016/10/25/study-reservoirs-a-significant-contributor-to-climate-change, referencing the Oxford, October 2016 study.)

This is in addition to GHG from new dams' manufacture, transportation, and construction that creates millions of pounds of carbon dioxide. Cement is reportedly responsible for about 8% of the world's carbon dioxide emissions. (**https://www.bbc.com/news/science-environment-46455844)** That report indicated that "[i]f the cement industry were a country, it would be the third largest emitter in the world - behind China and the US. It contributes more CO2 than aviation fuel (2.5%) and is not far behind the global agriculture business (12%)."

We request that the proposal to build a new Pacheco dam and reservoir—with their dubious benefits and increasing costs— be rejected, and that full consideration be given to other solutions and to other water sources that reflect improved technology available here in Silicon Valley, and a 21st century water vision.

Respectfully submitted,

Alan and Meg Giberson
Los Gatos, California

Cc: Todd Sexauer, tsexauer@valleywater.org

3.12 Irvin, Katja

From: Katja Irvin
To: Ryan McCarter
Cc: Christopher Hakes
Subject: Re: Pacheco Reservoir Expansion Project Virtual Public Scoping Meetings and Open House
Date: Wednesday, February 24, 2021 8:30:46 PM
Attachments: image001.png

Hi Ryan,

Thanks for your response. It's confusing because it's been so long since the initial NOP, but I take your word that it isn't "required." I assume the scoping comments from the original NOP are still valid and will be addressed.

I will likely send additional scoping comments. Will do my best to meet the deadline.

Best regards,
Katja

On Wednesday, February 24, 2021, 03:47:43 PM PST, Ryan McCarter <rmccarter@valleywater.org> wrote:

Hi Katja,

Chris forwarded me your messages below a few weeks ago and our team developed a response. However, we had a miscommunication and never sent our reply to you. Here are the responses to your questions:

In answering your initial question regarding the Notice of Preparation (NOP), Valley Water will not be re-posting the NOP to the CEQAnet Database through the state clearinghouse. CEQA does not require an NOP to be revised when revisions are made to a proposed project after the NOP is published. EIR scoping is an ongoing process and project changes are anticipated during project development, and during the scoping process. Valley Water has made the August 2017 NOP and Initial Study available for further review on the Pacheco Reservoir Expansion Project webpage at the following link: https://www.valleywater.org/pachecoexpansion.

In an effort to update public agencies and members of the public regarding news about the scope and content of the project prior to the upcoming public scoping meetings on February 24th and 25th (see link to Public Notice; Pacheco_Public Notice_Lettersize_.pdf (valleywater.org), Valley Water posted a narrated virtual public scoping meeting slide presentation, which provides updated project information. The presentation can be viewed at the above link on the Project webpage. This link was also included in the Public Notice. The slide presentation provides updated information on project alternatives currently under consideration for the Pacheco Reservoir Expansion Project, in addition to potential anticipated project impacts.

Thank you for your participation at the scoping meeting today and I apologize we did not respond to you prior. Please let us know if you have any further questions about the Pacheco Reservoir Expansion Project or the CEQA scoping process. As a reminder, scoping comments should be sent to PachecoExpansion@valleywater.org or mailed to SCVWD attn: Todd Sexauer as noted in the meeting.

Regards,

RYAN McCARTER, PE
Engineering Unit Manager

Pacheco Project Delivery Unit

Tel. (408) 630-2983 / Cell. (408) 398-7889

5750 Almaden Expressway, San Jose CA 95118
www.valleywater.org

From: Christopher Hakes <CHakes@valleywater.org>

Begin forwarded message:

> **From:** Katja Irvin <katja.irvin@sbcglobal.net>
> **Date:** February 8, 2021 at 6:14:56 PM PST
> **To:** Christopher Hakes <CHakes@valleywater.org>
> **Subject: Re: Pacheco Reservoir Expansion Project Virtual Public Scoping Meetings and Open House**
>
> Also, if there is "news about the scope and content of the Project," there should be a new NOP that incorporates information about the updated scope and content developed since 2017. Those wishing to comment need something in writing to refer to. Relying on a verbal presentation isn't sufficient.
>
> Best regards,
>
> Katja
>
> On Monday, February 8, 2021, 05:46:53 PM PST, Katja Irvin <katja.irvin@sbcglobal.net> wrote:
>
> Hi Chris,
>
> This process is confusing. Will the NOP be re-posted to CEQA Net?
>
> Thanks,
>
> Katja
>
> ---- Forwarded Message ----
>
> **From:** Valley Water <valleywaterpr@valleywater.org>
>
> **To:** "katja.irvin@sbcglobal.net" <katja.irvin@sbcglobal.net>
>
> **Sent:** Monday, February 8, 2021, 04:30:14 PM PST

The Santa Clara Valley Water District (Valley Water) is working to ensure a more reliable water supply for the region through the proposed expansion of Pacheco Reservoir in Southern Santa Clara County. In partnership with the San Benito County Water District and Pacheco Pass Water District, the proposed project would increase the reservoir's capacity from 5,500 acre-feet to up to 140,000 acre-feet, which could hold enough water to supply 1.4 million residents for one year during an emergency.

The project would also provide environmental benefits to the federally threatened South-Central California Coast Steelhead through habitat enhancement in and along Pacheco Creek.

Valley Water issued a Notice of Preparation for an Environmental Impact Report (EIR) for the Pacheco Reservoir Expansion Project (Project) in 2017 and solicited public scoping comments at that time. Since 2017, Valley Water has more fully developed the project, and we are now seeking additional comments about the scope and content of the EIR.

Valley Water is inviting you to join us at either of our two virtual public scoping meetings to learn the latest news about the scope and content of the Project EIR that Valley Water is preparing. We're encouraging the public and agencies to provide new comments on the scope and content of the EIR, which can be submitted by mail or email to Valley Water as described below.

The meetings are scheduled for:

Wednesday, Feb. 24, 2021, 1:00–3:00 p.m.

Please click the link below to join the webinar:

https://valleywater.zoom.us/j/91921107970

Dial-in +1 669 900 9128

Webinar ID: 919 2110 7970

Thursday, Feb. 25, 2021, 5:30–7:30 p.m.

Please click the link below to join the webinar:

https://valleywater.zoom.us/j/98088128557

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PLEASE READ THE NOTICE OF VIRTUAL PUBLIC SCOPING MEETINGS AND PROJECT OPEN HOUSE

The meetings will include an open house period, detailed presentation, and an opportunity for you to ask questions. Valley Water staff will be present to respond to as many of your questions as possible.

Written comments regarding the scope and content of the EIR will be accepted through March 12, 2021, at 5:00 p.m. Written comments can be submitted by email to PachecoExpansion@valleywater.org or mailed to:

Santa Clara Valley Water District

Attn: Todd Sexauer

5750 Almaden Expressway

San Jose, CA 95118

Valley Water will stream the meetings on Facebook Live: www.facebook.com/SCVWD. Video recordings of the meetings will be posted on the project web page at www.valleywater.org/pachecoexpansion.

The presentation and an accompanying video are posted at www.valleywater.org/pachecoexpansion.

The project page also has informational videos and a variety of documents with more information about the proposed expansion of Pacheco Reservoir.

We hope you will join us.

Sincerely,

Chris Hakes

Deputy Operating Officer

3.13 Patrie, Robert

From: Robert Patrie
To: Pacheco Expansion
Cc: Ferry, Susan@Parks
Subject: GIS information request
Date: Thursday, March 4, 2021 1:40:03 PM

Dear Sir or Madam,
Can you please send me the the following GIS information for the five proposed Pacheco Reservoir expansion options:

1. the dam center line coordinates
2. the maximum spillway elevation

Thank you
regards
--bob patrie

3.14 Sherman

Comments on the scope and content of the EIR on the Pacheco Dam Expansion Project

Summary

- Recent estimated dam cost increase requires a "No Project" Option and an Alternate (Solutions to Individual) Projects Option to be seriously evaluated and compared to Dam Expansion Alternatives in the EIR.

- Costs versus benefits of the Dam Expansion Alternatives presented at the 2/24/21 Webinar appear far less favorable than investing in other proposed Central Valley dam growth to capture surplus runoff in years it's available. Valley Water is currently evaluating several such possible investments to gain measurable benefits as described below.

- The 2020-21 Monitoring and Assessment Program (MAP) Report on Water Supply Master Plan 2040 released in October 2020 indicates the current supply is adequate to achieve planned service levels and continue to exceed revised demand for several decades. The EIR needs to confirm this analysis and incorporate an early warning system to avoid a climate change driven rapid deterioration of this surplus of supply over demand.

- The presentation considered that the benefit of improved resiliency and improved emergency water supply are primary objectives of expanding the dam. The MAP analysis indicates that adequate supply versus demand already exists over the next several decades and they do not need the expansion because of other currently projected supply projects. The EIR needs to confirm the accuracy of each to compare the options accurately.

- The current advantages of the proposed dam expansion objectives are described in general, nebulous terms such as "improve", "restore", "eliminate", and "incidental reduction". The EIR needs to use measurable confirmable numbers or values to compare all options and expansion alternatives.

- The benefit advantages presented on 2/24 currently focus on present expectations. For a project of this size and duration the exponentially growing sources of climate change research and data suggest major evolutionary differences that must be considered to decide the direction to take today. References provided will aid the preparer of the EIR to address expected changes in the amount and location of snowfall, flooding, extreme storms, excess water, and resultant droughts that can reasonably effect California's water supply system and the current benefits projected for the Pacheco dam expansion.

Discussion

The recent increase in dam expansion cost from $1.3 billion to $2.5 billions, as details of the job emerge, requires Valley Water to step back and review other options available. The no expansion alternative previously promised by Valley Water needs to be strongly considered. A project at a certain price may be feasible but when it nearly doubles in price, responsible management needs to review whether it still represents the public interest.

I attended the webinar on February 24 on public scoping comments. It appeared to focus only on the optional alternate details of how the dam expansion would progress. The presentation avoided any discussion on whether it should progress at all, or on whether individual, more cost effective projects

might better achieve the stated objectives.

It is common for major projects to grow in cost as details progress and roadblocks emerge. Valley Water appears to have done a thorough job of trying to avoid that problem with the latest extensively evaluated $2.5 billion estimate. But this is a cost of $17,857 per acre-ft which only provides the capacity to collect an emergency supply of up to 140,000 acre-ft of surplus water and provide other financial and non-financial benefits. If the smaller dam expansion size of 90,000 size is chosen, the cost rises to $27,778 per acre-ft.

Either value is unreasonably high unless an extensive amount of surplus water can be captured annually. There is no evidence presented that indicates that this is remotely possible. This would have to be enough to fill and release the entire reservoir's capacity multiple times each and every year to be economically feasible and compare to typical water supply projects that Valley Water is already pursuing at typical costs in the range of $2000-$4000 per annual delivered acre-ft. As a project of this size progresses, expected benefits tend to diminish from the inflated initial estimates. Examples include Governor Brown's 'train to nowhere' and 'Waterfix'.

A year ago, on the Valley Water website, I questioned whether some of the benefits expected from Pacheco dam expansion would actually be delivered by the time the dam was completed in 2032, due to climate change. The urgency for a more reliable supply has diminished in the intervening year. Growing research on climate change already indicates that excess supply and other expected benefits might significantly diminish by the time the dam goes into operation. As a result, it becomes increasingly evident that an additional option needs to be considered in addition to the “No Project” option which provides none of the benefits expected from operation of the dam.

This additional option, 'Alternate Projects', would provide a comparison with the dam expansion to achieve each necessary objective by pursuing individual projects. During the webinar it was suggested that this might be possible. For example, would a smaller investment in expanding San Luis Reservoir provide more cost effective solutions to objectives 1, 3, and 5 described below? After a brief comment the remainder of my comments will focus on providing information that can aid in developing the scope and comments on the “No Project” and ”Alternate Projects” options.

A survey provided after the February 24 Webinar asked how many dollars customers were willing to spend to gain the benefits provided by the dam as described in the presentation. No specific tangible financial or non-financial benefits were identified. Cost ranges from $1 to $20 per water bill were provided. The survey answers, unfortunately, will not be relevant because the options did not represent reality, at least for any of the 1 million customers of San Jose Water Company who responded.

For this group, the extent of the increase questioned in the survey would be in addition to at least two scheduled increases that will have already raised their current bills up to 20% or more. These increases are due to the ratesetting Application 21-01-003 in process since January 1, in which SJWC is asking residential customers for an increase raising an average customer's bill by 18.73% in 2022, rising to 26% by 2024. In addition, a bill surcharge to cover the other necessary activities of Valley Water is scheduled to go into effect July 1. I don't have enough information to accurately quantify the increase, but it should be in the range of 3.5% to 5% based on historical amounts. If this roughly 53% of Valley Water's customers facing this increase in rates were fully informed in the questionnaire, the results of your survey would definitely describe materially lower support for funding the dam. For perspective, the proposed dam enlargement will cost an average of $1300 for every single resident of Santa Clara County. By 2022 the average customers annual bill covering several residents, will already be $1300

The Advantages of the proposed expansion project described in the webinar, are:

Primary Objectives -

1 To improve Resiliency and Emergency Water Supply

2 To restore Federally Threatened Steelhead Fish Habitat

Secondary Objectives -

3 To eliminate Water Quality Issues from San Luis Reservoir

4 To improve Delta Watershed Wetlands

Opportunity -

5 The opportunity for incidental reduction o downstream flooding.

The last Objective appears to only be considered a possible improvement but is not a currently measurable objective of the dam expansion.

The remainder of the 2/24 presentation focused on action alternatives, i.e. changes to the details of the expanded dam, although the "No Project" Alternative was promised. The project impacts to be assessed in the EIR focused on location, size, type and target flow dam differences and the cost to Valley Water dependent on the San Benito County Water District participation in the funding of the various alternatives. A comprehensive set of project impacts caused by various project activities are planned to be assessed in the EIR. However, as described in the presentation, the EIR will only address reasons to choose between the various design and implementation alternatives after the dam expansion has already been approved. The current cost considerations described already do not support this conclusion.

The presentation also indicated that the EIR would compare the differences between these various alternatives. Consideration will be given to the physical environment, human environment, Cultural and Tribal Resources, and mitigation methods that might effectively change the comparison. I am not knowledgeable enough to provide comments on #2 and #4 of the planned scope of alternatives stated above, currently under consideration. I do, however believe that the EIR must first compare cost versus performance differences in achieving all five Objectives to assure that the dam expansion is the best decision. This can only be done by first changing the scope of the EIR to include comparing the environmental impact of the "No Project"; "Alternate Individual Projects"; and the "Dam Expansion Project" to assure all are viable both today and on completion of dam construction in 2032.

There is a rapidly growing body of knowledge concerning environmental impact changes and future trends expected due to climate change. The rest of my comments focus on available information to help inform directors in selecting the best option among the following:

A. No Project Option

B. Alternate Individual Projects (to Achieve Selective Objectives of Option C), and

C. Pacheco Dam Expansion.

Rainfall and Snowfall Amounts and Locations are Changing-- Probable Impact on Water Supply and Flooding by 2032 Must be Considered in EIR Options Evaluation.

Current research indicates climate change caused extremes in rainfall and snowfall are likely. Some trends, already evident, indicate probable direction of some, uncertainty about others. On February 2, 2020 in the Valley Water Post on Pacheco Dam, I questioned whether the amount and location of surplus water then would affect the ability to fill the proposed dam by the time it is finished in 2032. Valley Water responded that they had evaluated expectations in 2030 and 2070. I had provided a link supporting my question by identifying numerous studies just starting to determine the actual expected changes in snowfall, rainfall, and expected flooding

Today, data on the actual change in Northern California snowfall over the last two decades is available, and the change is shocking. It provides evidence to determine if we're entering a new drought period or whether we are still in the same one that started in 2012. There are also dozens of studies that generally show that the extent and location of total rainfall, droughts, and flooding are changing faster than expected even last year. As a result, it is critical to understand in the EIR to what extent the expected benefits from each of the three main options can actually be delivered by 2032 due to this rapidly evolving environment caused by climate change /global warming. If the dam expansion can still be considered a feasible option, the different alternatives concerning the dam alternatives should then be evaluated in detail. Here are some of the new studies that raise concerns over usability of the dam option after completion.

Actual Snowfall Trends Appear to be Deteriorating Much Faster than Expected.

This link is to the original Stanford study of January 1, 2020 I referenced a year ago:

Reference 1---https://news.stanford.edu/2020/01/27/rain-less-snow-increases-flooding/

It points out that future storms are expected to generate more flooding because they contain a larger proportion of rainfall than they do of snowfall. It provides research data to quantify the differences to be expected. This general conclusion is confirmed by the fact that runoff of rainfall occurs at a much greater speed and in much larger quantities over a shorter time than melting snow does. It also concludes that rising temperatures will yield a greater proportion of rain versus snow. At that time, the Valley Water Article I questioned did not address this. The Valley Water post about the proposed dam on August 23, 2018, stated that it "would provide flood protection for disadvantaged communities" with no further explanation. In the February 24, 2021 webinar, a somewhat different "opportunity for incidental reduction of downstream flooding" statement was made which further described "extensive frequent flooding even for frequent/ small events". It was further clarified in a question response as being along the Pacheco River. The EIR needs to clarify more specifically the actual expectations for flooding improvement that the dam expansion is expected to achieve.

The following NBC Report entitled Sierra Snowpack has Major Drop over the Past Decade, published 13 months later on February 23, 2021 provides actual data to show how extensively the snowpack has dropped during the last two decades.

Reference 2 --- https://www.nbcbayarea.com/news/local/climate-in-crisis/sierra-snowpack-has-major-

drop-over-the-past-decade/2475777/

The key information in Reference 2 shows that from 2002 through 2011, annual snowpack measurements had remained slightly below historic averages since 1895, cumulatively achieving about 90% of average. A dramatic reduction was shown during 2012 through the current year of 2021. Only 2 years showed snowpacks that exceeded that historic average. Over this decade, the cumulative average dropped from 90% of historical to between 50 and 60 % of historical. Despite 2021's current snowpack measuring a meager 61% of historical average this month, it's on track to be the fourth or fifth BEST! during the decade. This data implies that we're probably still in the same drought since 2012 and the extreme high snowpacks in 2017 and 2019 were quite likely extreme aberrations driven by climate change.

Variability between years has also grown greatly due to the weather extremes generally acknowledged to be caused by climate change. The summary of findings in this report include climate change trends showing that less snowpack impacting 1/3 of CA water supply is likely; that warmer storms causing higher altitude snow will increase flooding risk; and that we will face longer fire seasons due to our longer and drier future climate.

Another new March 1, 2021 theoretical report, from the NOAA Climate Office suggests that California's future smaller snowpack is also subject to disappearing much earlier due to climate change. This will further disrupt the current water management conditions by an uncertain amount:

Reference 3 --- https://cpo.noaa.gov/News/News-Article/ArtMID/6226/ArticleID/2161/New-Study-Identifies-Mountain-Snowpack-Most-%e2%80%9cAt-Risk%e2%80%9d-from-Climate-Change

Atmospheric River Conceept Helps Predict Trends in Future Climate Change Impact on California Precipitation and Droughts.

Extensive research has been performed in the last few years on the concept of “atmospheric rivers” to understand extreme weather events, details and costs of flooding, and other forecasting techniques. It has proven especially helpful to start to understand the uncertainty of the extent in the near future of the effects of climate change. Here are several selected references that relate to recent findings on this concept that help to explain how this growing research helps experts provide better forecasting of future changes in California's water supply due to climate change.

This October 28, 2020 blog from the California Department of Water Resources briefly points out that half of California's water supply comes from atmospheric rivers, and explains their importance in the California water cycle, and how they relate to droughts and water storage facilities:

Reference 4 --- https://water.ca.gov/News/Blog/2020/October/Atmospheric-Rivers-and-Their-Impact-on-California-Reservoirs

Progressing from general information to more specific, the following September 24, 2020 news report describes how scientists have developed an AR1 to AR5 intensity scale over the last decade that is a key in the western U.S. to both water supply and flooding:

Reference 5 ---https://komonews.com/weather/scotts-weather-blog/new-atmospheric-river-scale-aims-to-measure-damage-potential-of-incoming-rain-storms

Of most importance, with this information, storms reaching the west coast can be better segregated by intensity and impact. AR1 and AR2 events are beneficial. Based on their specific location, they can become a lifeline to restock California reservoirs and, if, of sufficient amount, are the most effective way to prevent extensive droughts. At the other end of the scale are the AR4 and AR5 events that cause over 90% of flooding damage costs. AR3 events can contribute to both effects.

Data is growing, but it is premature to understand the actual change that the intensity, nature, and location of atmospheric rivers will have made by the time any proposed dam alternative has been completed in 2032. There is a theory that the polar vertex is changing due to much faster than expected melting of sea ice in the far North. Some scientists believe that as a result, the jet stream will move further north and that atmospheric river locations, water content, and frequency could soon diminish in California and increase in Washington and British Columbia. Enough information is not yet available to reach a conclusion, but early supporting data is already available from two sources. The first is an October 28, 2020 report from Scripps Oceanography Institute's Center for Western Weather and Water Extremes:

Reference 6 --- https://cw3e.ucsd.edu/distribution-of-landfalling-atmospheric-rivers-over-the-u-s-west-coast-during-water-year-2020-end-of-water-year-summary/

Between 2019 and 2020, actual data shows distinctly that while the number of atmospheric rivers remained constant, their strongest location reaching the coast was clearly farther north in 2020. It is too early to conclude if this is a trend supporting the theory discussed above or normal year to year variability. The following March 2 report from King 5 TV in Washington seems to help confirm the former:

Reference 7 --- https://www.king5.com/article/weather/washington-state-forms-healthy-snowpack/281-0708e722-b695-4239-a5ac-2c7189d4a541

The EIR must consider this type of information to evaluate whether and to how much these climate changes will positively or negatively affect today's quantitative and qualitative benefits of choosing the dam expansion over either Option A (No Change), or Option B (Alternate Individual Projects).

Other Factors Needing Identification in the EIR to Compare the Three Basic Options – Competing Dams and Dam Size Increases.

Does the number of already planned dams and improvement designed to draw surplus water from the Sierra have a current or future effect on the quantity planned to be captured by the expanded Pacheco Dam. Pertinent details are presented in the following article from California Ag Today:

Reference 8 --- https://californiaagtoday.com/more-water-storage-is-critical/

Valley Water's proposed CIP and their October 2020 report entitled "Fiscal Year 2020-21 Monitoring and Assessment Program Report Water Supply Master Plan 2040" describe involvement with several water supply projects that apparently include tie-ins with two of these new planned central valley storage upgrades. It also includes excellent research on a number of other issues discussed here. It is not clear how completion of them will affect surplus water sources for Pacheco dam and the dam's potential benefits? More specifically, in this September 21, 2020 Article by the Press, some interesting details are shown. The proposed Los Vaqueros upgrade costs 44% as much as Pacheco dam and

provides 82% of the largest alternate's storage capacity. The water source for this surplus water storage appears to draw ultimately from the same overall sources that would fill the expanded Pacheco Dam when surplus water exists. What evidence is available that these four projects will remain viable in addition to Pacheco's expanded dam,? This needs to be addressed early in the EIR

Reference 9 --- https://www.thepress.net/news/los-vaqueros-reservoir-expansion-moves-ahead/article_92cbfa14-f38f-11ea-b681-f796f76ee67b.html

Pertinent information on the proposed Sites reservoir is even more informative in considering the viability of the Pacheco dam expansion project. Based on a May 12, 2020 Mercury News article concerning Massive Northern California reservoir project scaled back amid questions about its $5 billion price tag and about how much water it could deliver:

Reference 10 --- https://www.mercurynews.com/2020/05/11/massive-northern-california-reservoir-project-scaled-back-to-reduce-costs/

Here's a comparison of costs between Sites original, Sites revised, and Pacheco's current costs per storage capability added and water supply actually expected to be delivered;

Table I

Comparison:	Sites Original	Sites Scaled Down	Pacheco Current
Cost (in $billions)	$5.10	$3.00	$2.50
Capacity in acre-ft. added	1.8 million	1.5 million	140,000 maximum
Cost/ acre-ft of capacity added	$2,833.00	$2,000.00	$17,587.00 to $27,778.00
Average annual yield (Acre-ft delivered) estimated	505000	243000	???? (Undefined in webinar) Note *
Project cost per annual acre-ft delivered	$10,099.00	$12,346.00	$$$$$ (Must be compared) Note *

It's clear from the information provided on the proposed Pacheco Dam that it is very much more expensive per acre-ft of storage capacity provided than even the scaled back Sites reservoir which might not survive financial evaluation at that cost. And Pacheco costs almost 9 times as much per acre-ft to add to storage capacity. The EIR must identify the estimated average annual yield that that capacity can generate (Note *) since the surplus water used to fill both reservoirs and the others identified above appears to come from the same source. Climate change effects by 2032 must be considered and quantified as much as possible to project the performance expected in the future.

Other Factors Needing Identification in the EIR to Compare the Three Basic Ooptions – Reduced Demand for Water per Latest Master Water Supply Plan.

Valley Water has an excellent Fiscal Year 2020-21 Monitoring and Assessment Program Report Water Supply Master Plan 2040 released in October 2020, referred to in the section following Reference 8 above. It describes the analysis they had performed to correct erroneous demand projection estimate previously presented in the Master Water Plan itself. As a result the current information identifies presently planned storage projects that should easily defer the need for additional projects, including

Pacheco, beyond 2030 as clearly stated in this report. The risk involved in eliminating the Pacheco dam expansion project for resiliency purposes must still be addressed due to potential extreme deviations to the currently planned Water Supply and Demand due to climate change.

A solution is readily available. The directors need an early warning system to assure that neither projected supply or demand deviate excessively from planned values that show that adequate supply is sufficient to exceed expected demand for decades. In the recommendation section of the Comments I provided on the preliminary Master Water Supply Report in August, 2019, I described a control chart that would provide an annual warning as the previous year's actual data was added. A system such as this, added to the MAP should eliminate unnecessary surprises.

Other Factors Needing Identification in the EIR to Compare the Three Basic Ooptions – Inclusion of Appropriate Costs in "No Project" and "Alternate Projects" Option.

Example: I've once read an article indicating significant repair of the existing 5500 acre-ft might be necessary. If accurate, the cost of this repair needs to be added to those options excluding dam expansion

Conclusion

Because of the high relative cost to expand the dam, the EIR must include a No Project Option and an Alternate (Solutions to Individual) Projects Option. Their comparable costs and benefits need to be seriously evaluated and compared to the Dam Expansion Alternatives presently planned to be considered in the EIR.

Cost versus benefits information on the Dam Expansion Alternatives, as presented at the 2/24/21 Webinar appear far less favorable than investing in other proposed Central Valley dam growth projects to capture surplus runoff in years it's available. Valley Water is currently evaluating four possible investments investments related to the new Sites Reservoir and the Los Vaqueros upgrade to get a measurable portion of the benefits in return for paying a portion of the costs. The measurable benefits and costs may be available from the report on Sites (reference 10 and Table 1), and for Los Vaqueros from reference 9. Necessary information on the missing Table 1, Note 1 may be available in the MAP report identified above.

The 2020-21 Monitoring and Assessment Program (MAP) Report on Water Supply Master Plan 2040 released in October 2020 indicates the current supply is adequate to achieve planned service levels and continue to exceed revised demand for several decades. The EIR needs to confirm this analysis and incorporate an early warning system to avoid rapid deterioration of this surplus of supply over demand due to climate change. The 2/24 presentation considered that the benefit of improved resiliency and improved emergency water supply are primary objectives of expanding the dam. The MAP analysis indicates that adequate supply versus demand already exists beyond the next decade and they do not need the expansion because of other currently projected supply projects. The EIR needs to confirm the accuracy of each to compare the options accurately.

Any analysis of the current benefits of any of the proposed options or expansion alternatives require the expectation of achieving specific benefits. The EIR needs to use measurable, confirmable numbers to compare instead of the undefined and nebulous terms "improve", "restore", "eliminate", and "incidental reduction".

These comments focus on providing information that points out the exponentially growing reference sources of solid data concerning the specific expectation over time on what the future is expected to bring due to climate change. For a project of this size that will take over a decade to complete, the comparisons by then will change the nature and extent of the benefits. The references provided will aid the preparer of the EIR to address these changes in amount and location of snowfall, flooding, extreme storms, surplus water, and resultant droughts that can reasonably effect California's water supply system and the current benefits projected for the Pacheco dam expansion.